Reeves Creek
DRI #2996

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1 Project Description

The proposed development is a mixed-use site located in northern Henry County, GA, near the City of Stockbridge and the I-75/I-675 interchange. The development will be located to the east of I-75 and I-675 and south of SR 138/Stockbridge Road. A vicinity map is shown in Figure 1 and an aerial map is shown in Figure 2. The proposed site plan is included in APPENDIX A**.**

The proposed development is anticipated to be completed in two phases. Phase 1 is expected to be completed by 2029, and full build-out (Phase 2) in 2035. Both scenarios were analyzed for this report. A northbound-only interchange with I-75 has also been proposed to align with the proposed Reeves Creek Parkway on Walt Stephens Road on the southern end of the site. Both Phase 1 and Phase 2 were analyzed with and without the proposed northbound-only interchange.

Figure 1: Vicinity Map

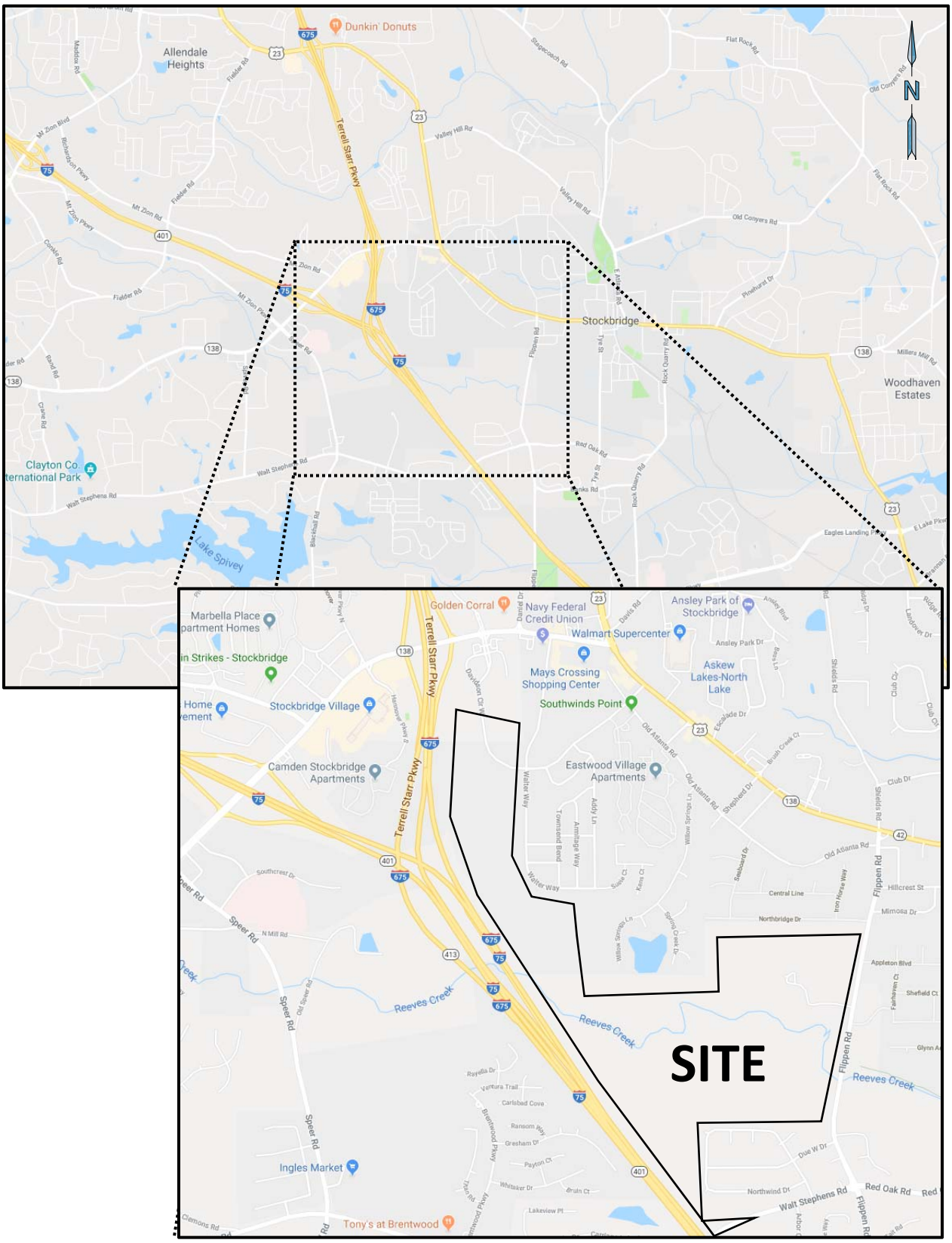


Figure 2: Aerial Map



1.1 Site Plan Summary

Table 1 shows proposed site land-uses summarized directly from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. The ITE Code and Description "150 – Warehousing" was used but will more closely resemble office showroom space. Medical-Dental Office Building, Home Improvement Superstore, Discount Club, Furniture Store, and Park-and-Ride Lot with Bus or Light Rail Service land uses will not be constructed until Phase 2. A full site plan is included in APPENDIX A.

Table 1: Land Use Summary

ITE Code	ITE Project Land Use Description	Density	Variable	Daily			AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out	Total	In	Out
210	Single-Family Detached Housing	282	Dwelling Unit	2,699	1,350	1,349	205	51	154	275	173	102
221	Multifamily Housing (Mid-Rise)	1,003	Dwelling Unit	5,465	2,733	2,732	328	85	243	405	247	158
252	Senior Adult Housing—Attached	429	Dwelling Unit	1,699	850	849	86	30	56	105	58	47
310	Hotel	1,000	Rooms	10,863	5,432	5,431	495	292	203	724	369	355
460	Arena	247,000	1000 S.F.	1,562	781	781	138	119	19	175	28	147
710	General Office Building	620,000	1000 S.F.	6,228	3,114	3,114	609	524	85	644	103	541
720	Medical-Dental Office Building	100,000	1000 S.F.	3,754	1,877	1,877	223	176	47	401	112	289
760	Research and Development Center	100,000	1000 S.F.	1,228	614	614	42	32	10	53	8	45
862	Home Improvement Superstore	100,000	1000 S.F.	3,074	1,537	1,537	157	89	68	233	114	119
820	Shopping Center	169,250	1000 S.F.	8,598	4,299	4,299	236	146	90	802	385	417
857	Discount Club	135,000	1000 S.F.	5,643	2,822	2,821	66	46	20	564	282	282
890	Furniture Store	125,000	1000 S.F.	693	347	346	31	22	9	51	24	27
945	Gasoline/Service Station with Convenience Market	18	Pumps	3,671	1,836	1,835	245	125	120	252	129	123
090	Park-and-Ride Lot with Bus or Light Rail Service Industrial	300	Lanes	917	459	458	119	84	35	143	36	107
150	Warehousing	150,000	1000 S.F.	283	142	141	43	33	10	46	12	34
	Total Trips			56,377	28,193	28,184	3,023	1,854	1,169	4,873	2,080	2,793
	Reductions for Internal Capture			12,229	6,115	6,114	252	126	126	1,139	569	570
	Reductions for Modal Split			1,051	529	522	70	55	15	88	25	63
	Reductions for Pass-By Trips			5,844	2,958	2,886	152	78	74	664	333	331
	Total Net New Project Trips			**37,253**	**18,591**	**18,662**	**2,549**	**1,595**	**954**	**2,982**	**1,153**	**1,829**

1.2 Site Access

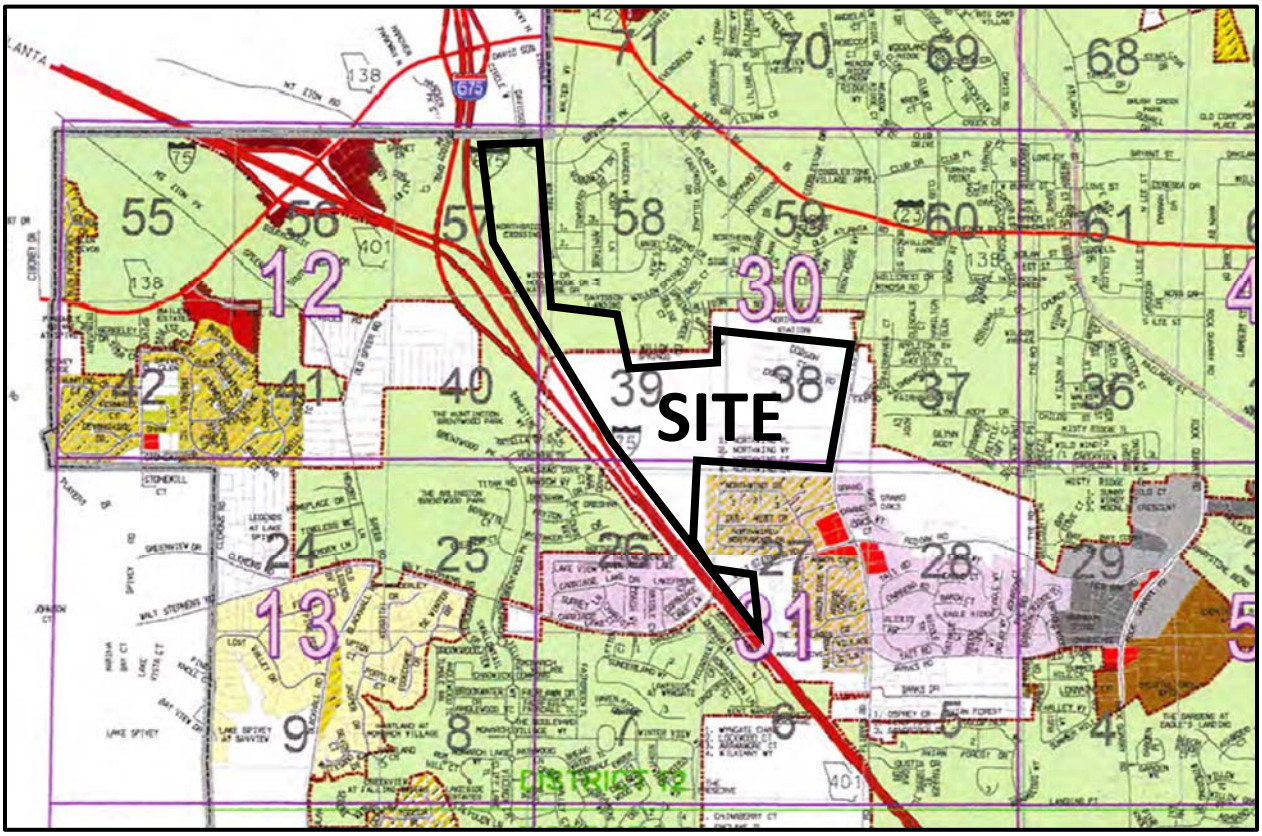
The proposed development will access the external roadway network via five proposed driveway locations. The proposed development will widen and partially relocate the existing Davidson Pkwy south of the intersection with SR 138 and connect it to a proposed Reeves Creek Parkway to the south. There are several proposed land-uses within this area of influence which will have newly proposed driveways. Along Flippen Rd, at least two full-access driveways are proposed which would service the land uses to the east of the site and a third driveway to service a proposed townhome land use. The proposed Reeves Creek Parkway that is proposed to connect with Davidson Parkway to the north is also proposed to intersect with Walt Stephens Road east of the current bridge over I-75. Proposed potential interstate access to I-75 northbound on Walt Stephens Rd would align with the proposed Reeves Creek Parkway.

- Driveway 1 (proposed Reeves Creek Parkway)
  - Connects to Davidson Parkway from the south, south of SR 138
  - Full access, four-leg proposed with commercial driveway to the west
- Driveway 2 (proposed Reeves Creek Parkway)
  - Located on Walt Stephens Road east of I-75 bridge
  - Full access, proposed as fourth leg of proposed I-75 northbound only interchange ramps
- Driveway 3 (proposed Fairhaven Road Extension)
  - Located on Flippen Road across from Fairhaven Road
  - Full access, four-leg proposed with Fairhaven Road
- Driveway 4
  - Located on Flippen Road north of Walt Stephens Road, south of Fairhaven Road
  - Just offset north of Driveway 5
- Driveway 5
  - Located on Flippen Road north of Walt Stephens Road, south of Fairhaven Road
  - Just offset south of Driveway 4

1.3 Zoning and Land Use

The site is currently zoned RA: Residential-agricultural zoning district. This district is intended to preserve the residential character of land while providing a transition between rural land and suburban/urban land. This district will also provide for detached single-family residential dwellings that are site-built or manufactured on lots. Future zoning plans call for commercial land uses in the area. Zoning to the north is controlled by the City of Stockbridge, GA. Land to the south is zoned R-2, C-1, and PD. Zoning for the site and adjacent parcels are shown in Figure 3.

Figure 3: Zoning Map



1.4 Nearby Project and Local Plan

Per Henry County's Future Development Plan, the site lies in a high-density residential zone. The site is surrounded by medium and medium-high residential zones. The DRI trigger for this development is the rezoning of the existing site to primarily commercial to match the proposed land uses.

No other known developments are planned at this time in or near the study area.

According to ARC's Transportation Improvement Program, Henry County Comprehensive Transportation Plan, and GDOT's Construction Work Program, the projects listed below in Table 2 are programmed or planned to be completed by the respective years. Further information on nearby related projects is contained in APPENDIX B.

Table 2: Projects in Study Network

Estimated Construction Date (Status)	Project ID	Sponsor, County	Project Description
2022 (Short-Range)	CL-064 (ARC) 322050 (GDOT)	GDOT, Henry/Clayton	US 23 Widening – From SR 138 To I-675 in Clayton County
2023 (Short-Range)	HE-179 (ARC) 0014482 (GDOT)	GDOT, Henry County	Western Parallel Connector – New Alignment From Jonesboro Rd to Hudson Bridge Rd
2023 (Short-Range)	HE-107 (ARC) 0007855 (GDOT)	GDOT, Henry County	US 23 Widening – From Downtown McDonough to SR 138 (N Henry Blvd)
2024-2035 (Mid-Range)	HE-161A (ARC) 0015090 (GDOT)	Henry County	Rock Quarry Road Widening – From Eagles Landing Pkwy to SR 42/138
2024-2035 (Mid-Range)	CL-063 (ARC)	Clayton County	Mount Zion Road Widening – From Richardson Pkwy to SR 138
2031-2040 (Long-Range)	HE-109 (ARC)	City of Stockbridge, Henry County	Rock Quarry Road Extension – New Alignment From SR 138/US 23 to Intersection of East Atlanta Rd and Valley Hill Rd
2031-2040 (Long-Range)	HE-132C (ARC)	Henry County	Eagles Landing Parkway Widening – From Eagles Pointe Pkwy to US 23
2031-2040 (Long-Range)	HE-138 (ARC)	Henry County	Old Conyers Road Widening – From East Atlanta Rd to Flat Rock Rd
2031-2040 (Long-Range)	HE-165B (ARC)	Henry County	Patrick Henry Parkway: Segment 2 Widening – From Jodeco Rd to Eagles Landing Pkwy
2031-2040 (Long-Range)	AR-ML-610 (ARC) 0013919 (GDOT)	GDOT, Regional/Southeast	I-75 South Express Lanes – From C.W. Grant Pkwy to SR 138
2031-2040 (Long-Range)	R-50 (Local)	Henry County	Walt Stephens Road Widening – From Blackhall Rd to Rock Quarry Rd
2031-2040 (Long-Range)	R-51 (A) (Local)	Henry County	Flippen Road Widening – From SR 138 to Walt Stephens Rd
2040+ (Unconstrained)	R-51 (B) (Local)	Henry County	Flippen Road Widening – Between Walt Stephens Rd and Stratford Cir
2040+ (Unconstrained)	R-51 (C) (Local)	Henry County	Flippen Road Extension – Between Stratford Cir and Jonesboro Rd

2 Existing Conditions

2.1 Bicycle and Pedestrian Facilities Description

Currently, there are no transit systems that service the area where the project site is located. A mass transit facility is proposed for the site; however, due to the lack of rail presence in the area, this facility would most likely begin as a bus rapid transit station. Sidewalks are present on both sides of SR 42/North Henry Boulevard and SR 138/Lake Spivey Parkway, and Henry County is aware of a potential increase in pedestrian activity in the area in the future. Bicycle lanes are not present in any of the surrounding roadways.

2.2 Transportation Facilities Description

Flippen Road is two-lane undivided roadway with a posted speed limit of 45 mph that runs primarily north to south and connects SR 42/138/US 23/North Henry Blvd to the north with Hudson Bridge Rd to the south. The roadway is functionally classified as an Urban Minor Arterial.

SR 42/North Henry Boulevard is a five-lane highway with a center turn lane. The roadway has a posted speed limit of 45 mph. Within the vicinity of the study area, east of Flippen Road, the highway runs primarily east to west. West of Flippen Road, the highway turns to run north to south. The highway is functionally classified as an Urban Principal Arterial and serves as a connection to I-75 and I-675 via SR 138/Lake Spivey Parkway.

SR 138/Lake Spivey Parkway is a five-lane roadway with a center turn lane. The roadway has a posted speed limit of 45 mph. Within the vicinity of the study area, the highway runs primarily east to west at its intersection with SR 42/North Henry Boulevard and then turns to run north to south at the interchange with I-75. The highway is functionally classified as an Urban Principal Arterial and has interchanges with both I-75 and I-675 and provides connection to the City of Jonesboro to the west.

Walter Way is a two-lane undivided local roadway with a posted speed limit of 35 mph that runs north to south within the vicinity of the study area and serves commercial development near its intersection with SR 138/Lake Spivey Parkway. Walter Way intersects Davidson Parkway before traveling south/southeast and then turning east to west and terminating within residential development.

Davidson Parkway is a two-lane undivided local roadway with a posted speed limit of 25 mph. South of SR 138/Lake Spivey Parkway, Davidson Parkway runs in a quarter-circle in the southwest quadrant of SR 42 and SR 138 serving as connection for residential developments, then turns to run south/southeast before turning to an east-west direction and intersecting Walter Way and continuing to run east to west before intersecting with SR 42/North Henry Boulevard to the east. North of SR 138/Lake Spivey Parkway, Davidson Parkway serves commercial and residential development.

Walt Stephens Road/Red Oak Road is a two-lane undivided roadway with a posted speed limit of 45 mph that runs primarily east to west and is named Red Oak Road east of the intersection with Flippen Road. The roadway is functionally classified as an Urban Minor Arterial and primarily serves residential developments.

Banks Road is a two-lane undivided local roadway with a posted speed limit of 35 mph that runs east to west from Flippen Road to Rock Quarry Road just south of Red Oak Road. Banks Road primarily serves residential developments.

Speer Road is a two-lane undivided roadway with a posted speed limit of 45 mph that runs primarily north to south from Walt Stephens Road to SR 138/Lake Spivey Parkway. The roadway is functionally classified as an Urban Minor Arterial and primarily serves residential developments.

Spivey Road is a two-lane undivided local roadway just west of Speer Road with a posted speed limit of 40 mph that runs north to south from Walt Stephens Road to SR 138/Lake Spivey Parkway. The roadway is functionally classified as an Urban Minor Arterial and serves primarily residential developments.

Rock Quarry Road is a two-lane undivided roadway with a posted speed limit of 35 mph that runs primarily north to south from Eagles Landing Parkway to SR 42/138/US 23/North Henry Boulevard. The roadway is functionally classified as an Urban Minor Arterial and serves residential and commercial developments.

I-75 is an interstate freeway which runs north to south along the western side of the proposed development. I-75 splits with I-675 north of the site and continues running north/northwest toward the south end of I-285.

I-675 is an interstate freeway which splits from I-75 north of the site. At the interchange with SR 138/Lake Spivey Parkway, the interstate runs north to south and continues north toward southeast I-285.

2.3 Study Network

The study network was identified primarily by the Georgia Regional Transportation Authority's (GRTA's) 7% rule and was approved during the DRI Pre-Review Meeting on April 18, 2019 for the proposed DRI. The intersections analyzed in this report are listed in Table 3 and study segments are listed in Table 4. The existing lane geometry is shown in Figure 4**.**

Table 3: Study Intersections

#	Intersections
1	SR 138 at SR 42/US 23/N Henry Blvd
2	SR 42/SR 138/US 23/N Henry Blvd at Rock Quarry Rd
3	SR 42/SR 138/US 23/N Henry Blvd at S Lee St
4	SR 42/SR 138/US 23/N Henry Blvd at E Atlanta Rd
5	SR 42/SR 138/US 23/N Henry Blvd at Flippen Rd
6	SR 42/SR 138/US 23/N Henry Blvd at Davidson Pkwy
7	SR 42/US 23/N Henry Blvd at SR 138/Stockbridge Rd
8	SR 42/US 23/N Henry Blvd at Valley Hill Rd
9	SR 138/Stockbridge Rd at Walter Way
10	SR 138/Stockbridge Rd at Daniel Dr
11	SR 138/Stockbridge Rd at Davidson Pkwy
12	SR 138/Lake Spivey Pkwy at I-675 NB
13	SR 138/Lake Spivey Pkwy at I-675 SB
14	SR 138/Lake Spivey Pkwy at Hannover Pkwy
15	SR 138/Lake Spivey Pkwy at Mt Zion Rd
16	SR 138/Lake Spivey Pkwy at I-75 NB
17	SR 138/Lake Spivey Pkwy at I-75 SB
18	SR 138/Lake Spivey Pkwy at Mt Zion Pkwy/Speer Rd
19	SR 138/Lake Spivey Pkwy at Spivey Rd
20	Walt Stephens Rd at Spivey Rd
21	Walt Stephens Rd at Speer Rd/Blackhall Rd
22	Walt Stephens Rd at Brentwood Pkwy/Monarch Village Way
23	Walt Stephens Rd at Flippen Rd
24	Flippen Rd at Banks Rd
25	Banks Rd at Tye St
26	Rock Quarry Rd at Banks Rd
27	Rock Quarry Rd at Red Oak Rd
28	Red Oak Rd at Tye St
29	Davidson Pkwy at Walter Way
30	Flippen Rd at Fairhaven Rd/Fairhaven Rd Ext
31	Davidson Pkwy at *proposed* Reeves Creek Pkwy/commercial dwy
32	Walt Stephens Rd at *proposed* Reeves Creek Pkwy/I-75 NB
33	Flippen Rd at Dwy 4
34	Flippen Rd at Dwy 5

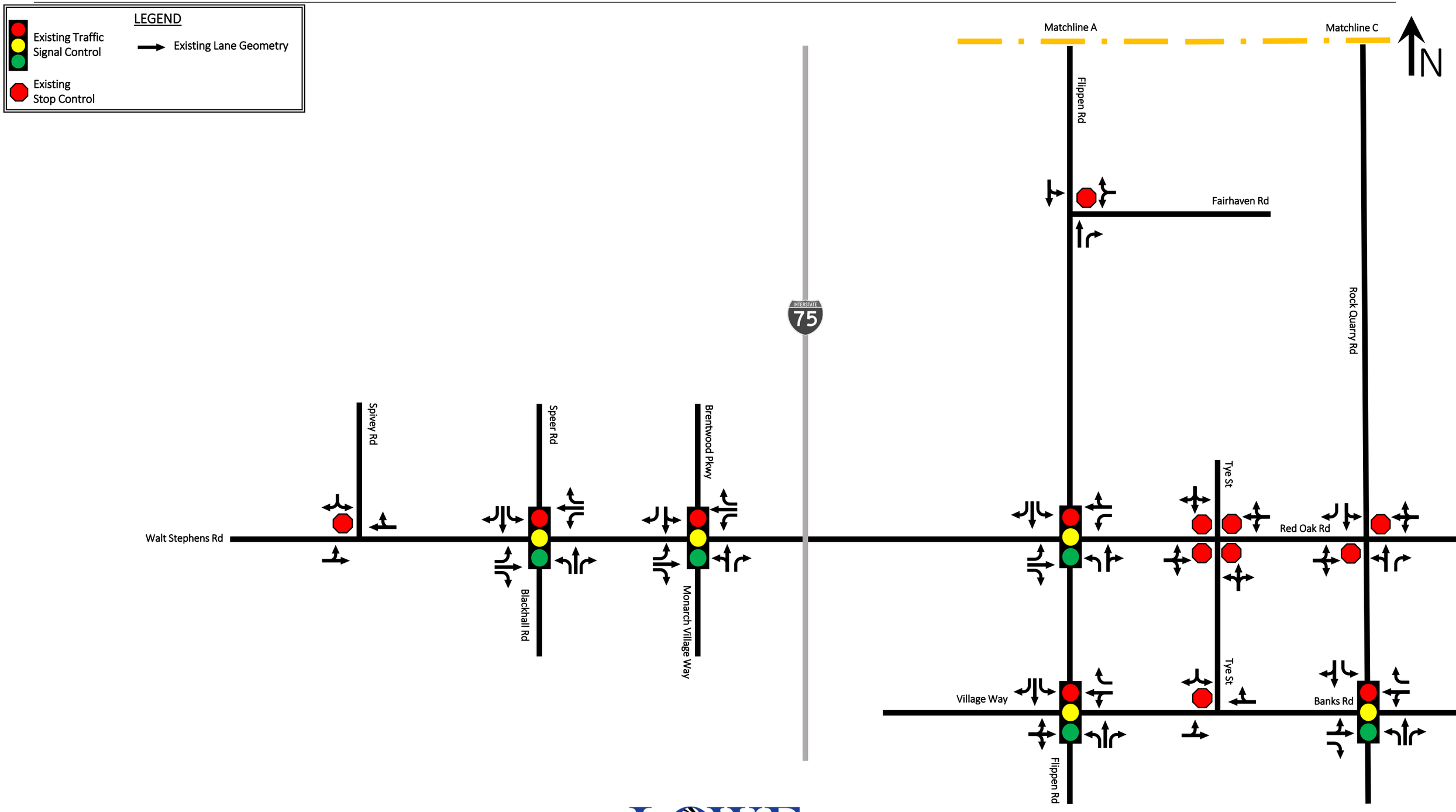
Table 4: Study Segments

#	Segment	From	To
1	Flippen Rd	Banks Rd	Walt Stephens Rd
2	Flippen Rd	Walt Stephens Rd	SR 42-138/US 23/N Henry Blvd
3	Banks Rd	Flippen Rd	Rock Quarry Rd
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd
5	SR 42/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd
6	SR 42/US 23/N Henry Blvd	Flippen Rd	SR 138/Stockbridge Rd
7	SR 42/US 23/N Henry Blvd	E Atlanta Rd	Flippen Rd
8	SR 42/US 23/N Henry Blvd	S Lee St	E Atlanta Rd
9	SR 42/US 23/N Henry Blvd	Rock Quarry Rd	S Lee St
10	SR 42/US 23/N Henry Blvd	SR 42/US 23	Rock Quarry Rd
11	SR 138/Stockbridge Rd	SR 42/US 23/N Henry Blvd	Walter Way
12	SR 138/Stockbridge Rd	Walter Way	Daniel Dr
13	SR 138/Stockbridge Rd	Daniel Dr	Davidson Pkwy
14	SR 138/Lake Spivey Pkwy	Davidson Pkwy	I-675 NB Ramps
15	SR 138/Lake Spivey Pkwy	I-675 NB Ramps	I-675 SB Ramps
16	SR 138/Lake Spivey Pkwy	I-675 SB Ramps	Hannover Pkwy
17	SR 138/Lake Spivey Pkwy	Hannover Pkwy	Mt Zion Rd
18	SR 138/Lake Spivey Pkwy	Mt Zion Rd	I-75 NB Ramps
19	SR 138/Lake Spivey Pkwy	I-75 NB Ramps	I-75 SB Ramps
20	SR 138/Lake Spivey Pkwy	I-75 SB Ramps	Mt Zion Pkwy/Speer Rd
21	SR 138/Lake Spivey Pkwy	Mt Zion Pkwy/Speer Rd	Spivey Rd
22	Davidson Pkwy	SR 138/Lake Spivey Pkwy	SR 42-138/US 23/N Henry Blvd
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd
26	Walt Stephens Rd	Flippen Rd	Brentwood Pkwy
27	Walt Stephens Rd	Brentwood Pkwy	Blackhall Rd/Speer Rd
28	Walt Stephens Rd	Blackhall Rd/Speer Rd	Spivey Rd

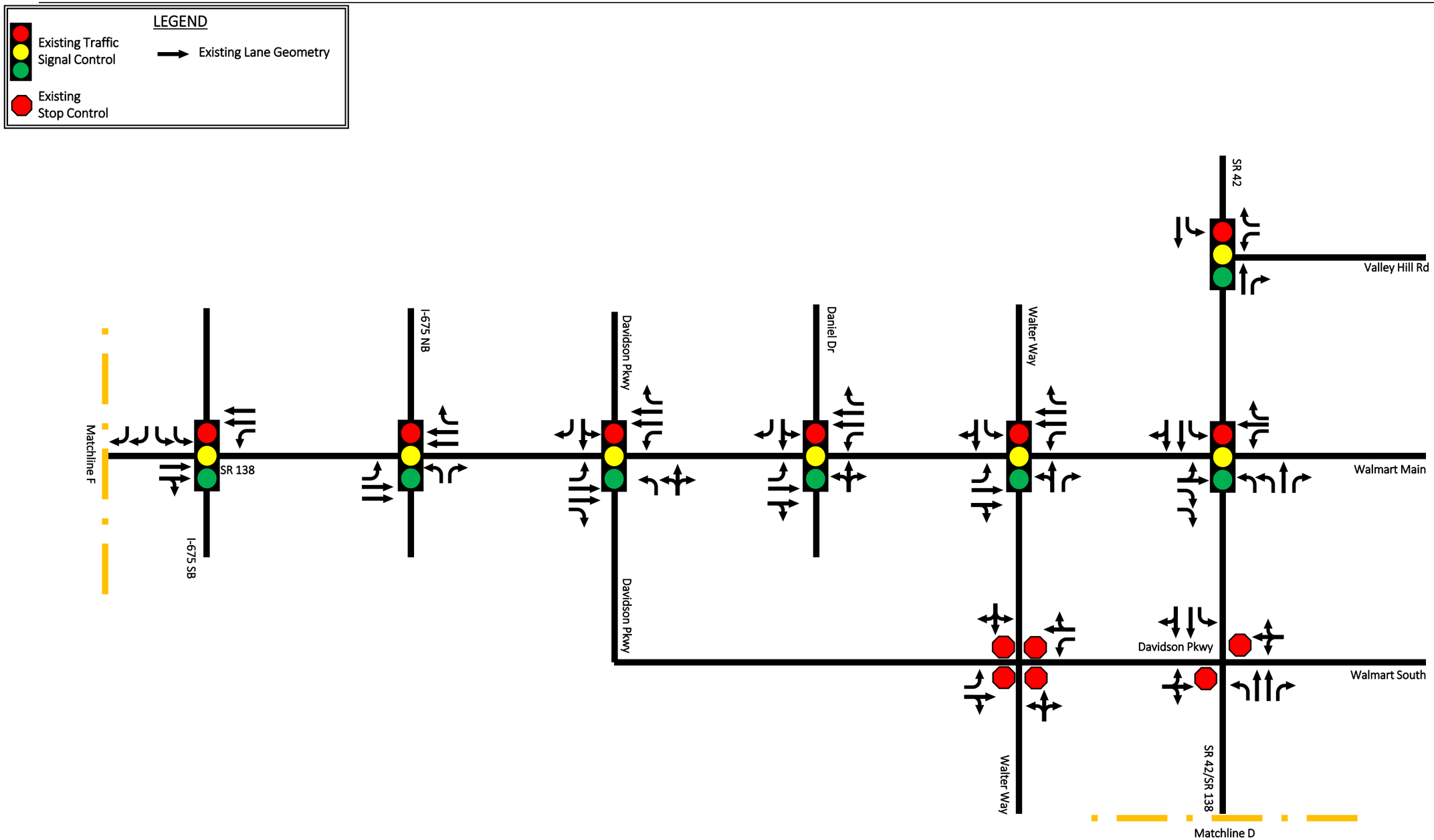
2.4 Traffic Data

Traffic counts were performed at the study intersections on Thursday, May 9th, 2019 while school was in session. The AM peak hour was determined to be 7:15 AM-8:15 AM and the PM peak hour was determined to be 5:00 PM-6:00 PM. The peak hour turning movement volumes are shown graphically in Figure 5**.** Additional 24-hour bi-directional vehicle classification counts were collected on Walt Stephens Road east of the I-75 bridge, on Flippen Road just south of Fairhaven Road, and on Spivey Road. The raw traffic counts are included in APPENDIX C.

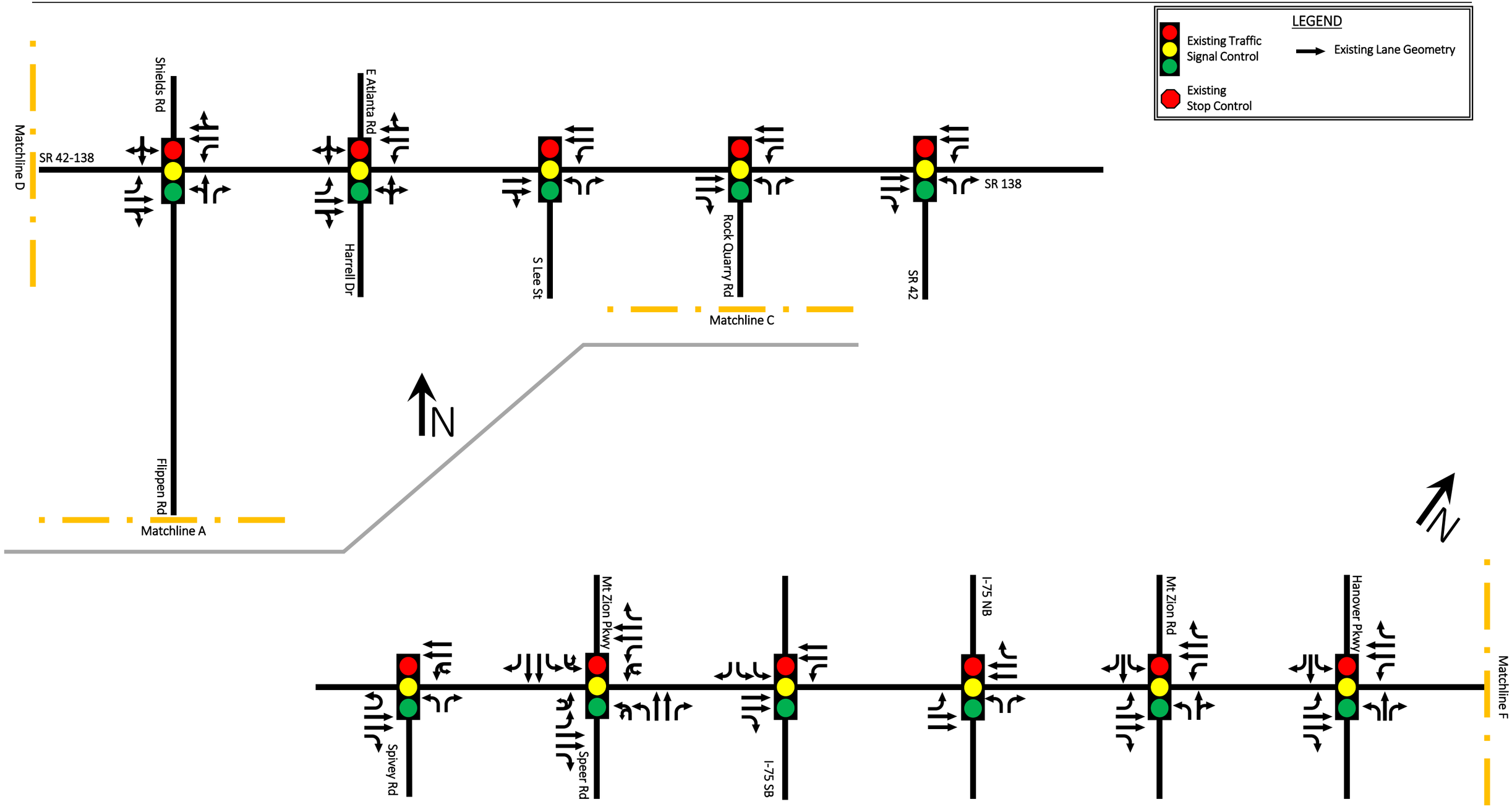
Reeves Creek DRI Existing Lane Geometry – Figure 4A



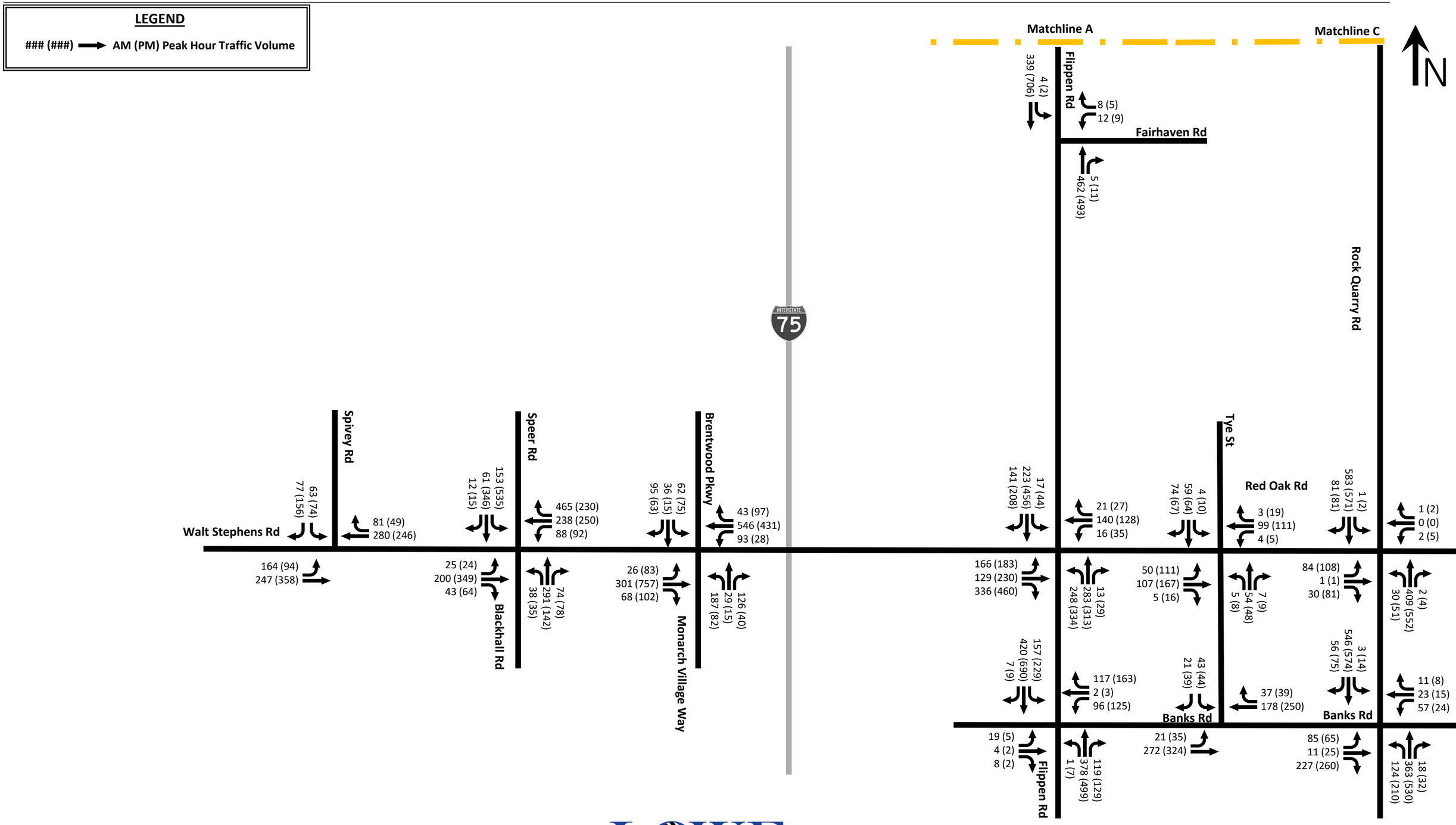
Reeves Creek DRI Existing Lane Geometry – Figure 4B



Reeves Creek DRI Existing Lane Geometry – Figure 4C



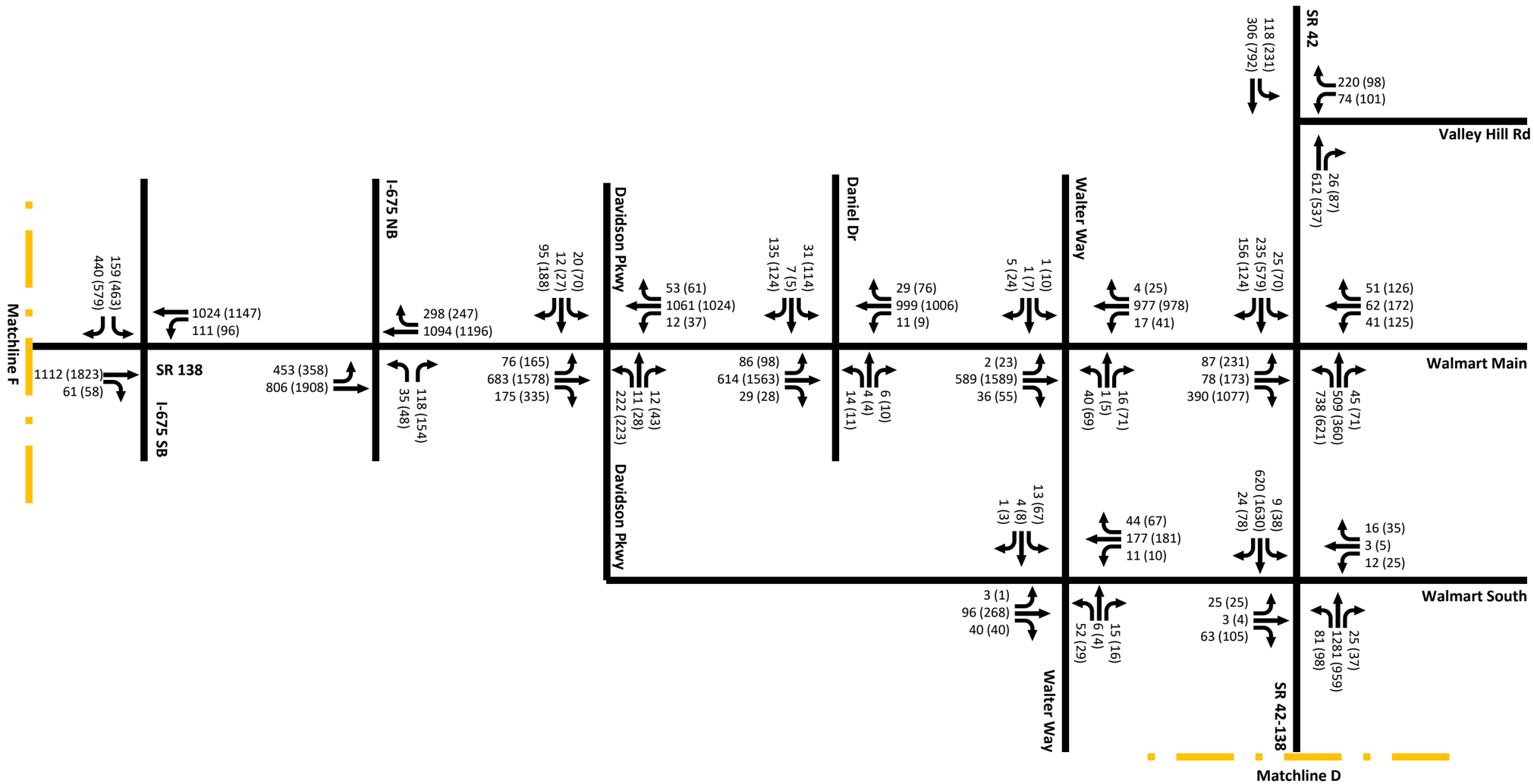
Reeves Creek DRI Existing Traffic Volumes – Figure 5A



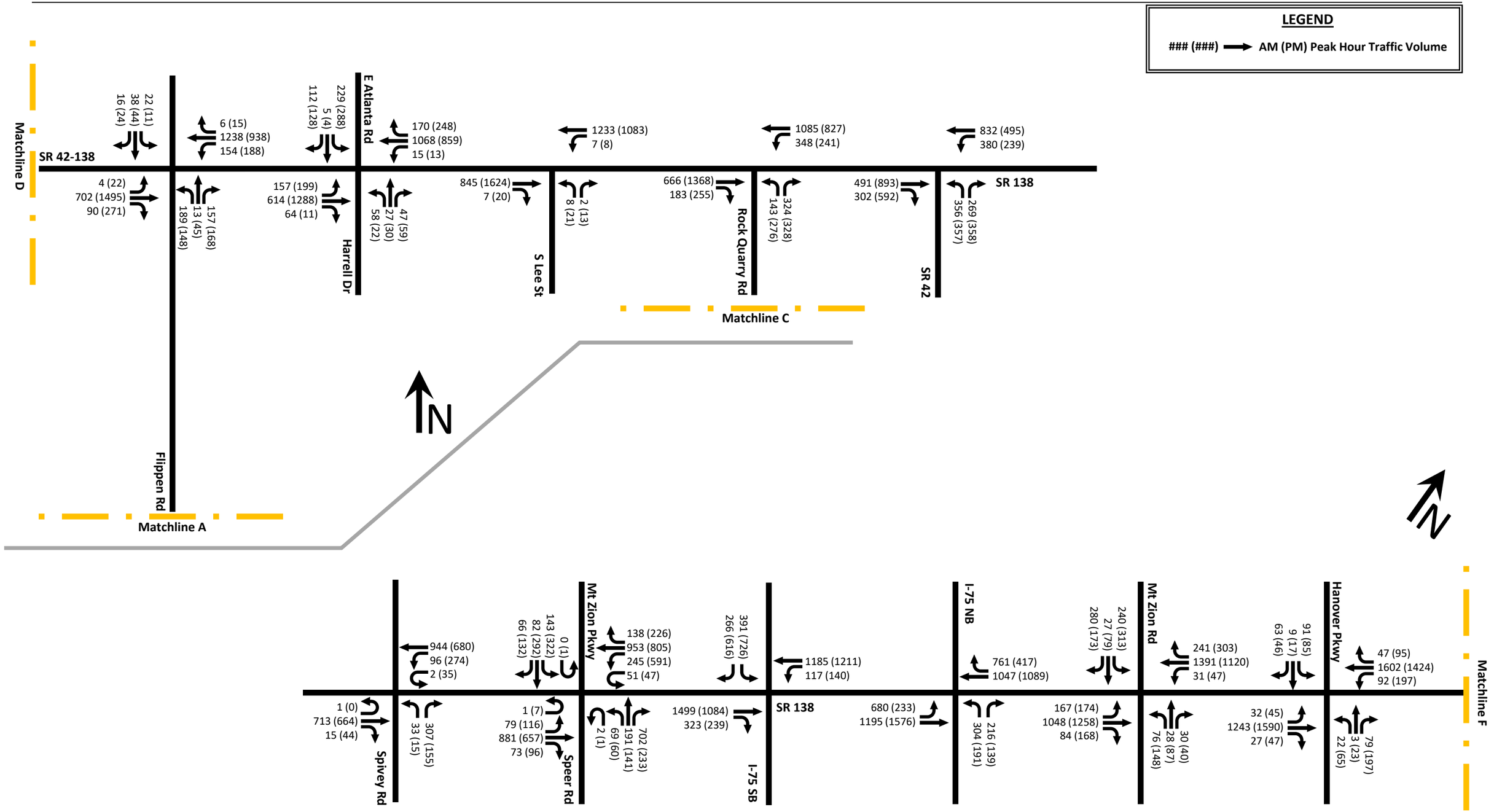
Reeves Creek DRI Existing Traffic Volumes – Figure 5B

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume



Reeves Creek DRI Existing Traffic Volumes – Figure 5C



2.5 Existing Capacity Analysis

The existing traffic volumes were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The typical Level of Service standard is D in an urban and/or suburban area. However, for this DRI, if in Existing Conditions, the LOS is E or F, the prevailing LOS standard for Background and Build conditions shall be E. The HCM 6th Edition was used for analysis. Table 5 shows the Existing Capacity Analysis. Synchro output files are included in APPENDIX D.

Table 5: Existing Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	33.1	C	65.2	**E**
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	28.3	C	23.5	C
SR 42-138/US 23/N Henry Blvd @ S Lee St	Traffic Signal	Intersection	0.8	A	1.7	A
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	45.0	D	29.0	C
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	25.9	C	63.2	**E**
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T+R	53.9	F	2616.6	F
		WB L+T+R	101.7	F	1798.9	F
		NB L	9.4	A	19.8	C
		SB L	12.4	B	10.8	B
		Intersection	4.1	-	154.6	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	42.2	D	85.7	F
SR 42/US 23/N Henry Blvd @ Valley Hill Rd	Traffic Signal	Intersection	26.4	C	20.0	C
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	Intersection	8.0	A	22.5	C
SR 138/Stockbridge Rd @ Daniel Dr	Traffic Signal	Intersection	8.4	A	9.5	A
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	11.8	B	40.7	D
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	23.5	C	14.7	B
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	24.2	C	33.1	C
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	6.4	A	12.8	B
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	15.7	B	19.4	B
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	24.8	C	9.5	A
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	11.3	B	54.4	D
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	51.5	D	49.2	D
SR 138/Lake Spivey Pkwy @ Spivey Rd	Traffic Signal	Intersection	12.6	B	10.5	B
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	10.1	B	8.2	A
		SB L+R	261.1	F	20.9	C
		Intersection	41.9	-	5.7	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	28.6	C	20.4	C
Walt Stephens Rd @ Monarch Village Way/Brentwood Pkwy	Traffic Signal	Intersection	21.9	C	16.0	B
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	24.5	C	102.3	F
Flippen Rd @ Banks Rd/Village Way	Traffic Signal	Intersection	17.5	B	16.1	B
Banks Rd @ Tye St	Side Street Stop Control	EB L	7.8	A	8.0	A
		SB L+R	12.8	B	13.8	B
		Intersection	1.7	-	2.0	-
Rock Quarry Rd @ Banks Rd/Carrington Ridge	Traffic Signal	Intersection	33.0	C	32.4	C
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	EB L+T+R	47.5	**E**	133.3	F
		WB L+T+R	23.6	C	36.1	**E**
		NB L	9.3	A	9.2	A
		SB L	8.2	A	8.6	A
		Intersection	4.7	-	17.9	-
Red Oak Rd @ Tye St	All-Way Stop Control	EB L+T+R	9.6	A	11.3	B
		WB L+T+R	8.8	A	9.0	A
		NB L+T+R	8.6	A	8.9	A
		SB L+T+R	8.8	A	9.2	A
		Intersection	**9.0**	**A**	**10.1**	**B**
Davidson Pkwy @ Walter Way	All-Way Stop Control	EB L	8.2	A	8.4	A
		EB T+R	8.6	A	12.1	B
		WB L	8.2	A	8.6	A
		WB T+R	9.6	A	10.7	B
		NB L+T+R	8.5	A	9.0	A
		SB L+T+R	8.3	A	9.5	A
		Intersection	**9.0**	**A**	**11.0**	**B**
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	WB L+R	15.2	C	22.4	C
		SB L	8.5	A	8.6	A
		Intersection	0.4	-	0.3	-

The SR 42-138/US 23/North Henry Boulevard and SR 138/Lake Spivey Parkway corridors are managed corridors; due to the large volume of vehicles traveling in either direction on each corridor, mainline traffic volume is prioritized at the expense of minor road movement delay. Signal timings used in analysis are included in the Synchro output files in APPENDIX D.

Intersections not listed below currently operate with a LOS of D or better. The following intersections currently experience inadequate LOS during one or both peak hours:

SR 138 at SR 42/US 23/N Henry Blvd

- Intersection is LOS E during the PM peak hour
- LOS standard for Background and Build conditions is LOS E during the PM peak hour

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- Intersection is LOS E during the PM peak hour
- LOS standard for Background and Build conditions is LOS E during the PM peak hour

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Eastbound single-lane shared approach is LOS F during both peak hours
- Westbound single-lane shared approach is LOS F during both peak hours
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.
- LOS standard for Background and Build conditions is LOS E for both side street approaches during both peak hours.

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- Intersection is LOS F during the PM peak hour
- LOS standard for Background and Build conditions is LOS E during the PM peak hour

Walt Stephens Rd at Spivey Rd

- Southbound single-lane shared approach is LOS F during the AM peak hour
- Delay in the AM peak hour is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.
- LOS standard for Background and Build conditions is LOS E during the AM peak hour for the southbound approach.

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- Intersection is LOS F during the PM peak hour
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

Rock Quarry Rd at Red Oak Rd

- Eastbound single-lane shared approach is LOS E during the AM peak hour and LOS F during the PM peak hour
- Westbound single-lane shared approach is LOS E during the PM peak hour
- Delay for the eastbound single-lane approach during both peak hours is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.
- LOS standard for Background and Build conditions is LOS E during both peak hours for the eastbound approach and LOS E during the PM peak hour for the westbound approach.

2.6 Existing Conditions Required Improvements

Improvements were identified for intersections with inadequate LOS in Existing Conditions. These improvements are independent of Background Conditions and were not specifically considered for Background Conditions Required Improvements or Build Required Improvements. The GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing. The results of the Existing Conditions Required Improvements capacity analysis are shown in Table 6.

The following improvements are needed for Existing Conditions:

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Add 1 EBR lane, 1 WBR lane, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- Add 1 EBL lane, 1 NBT lane, 1 SBR lane

Walt Stephens Rd at Spivey Rd

- Add 1 SBR lane, 1 EBL lane, 1 WBR lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- Make EBR free flow right turn lane (add lane on Flippen Rd south of intersection)

Rock Quarry Rd at Red Oak Rd

- Add 1 EBR lane, 1 NBL lane, 1 NBT lane

Table 6: Existing Conditions Required Improvements Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T	107.4	F	3660.6	F
		EB R	11.0	B	23.4	C
		EB Approach	**40.7**	**E**	**810.6**	**F**
		WB L+T	167.6	F	1927.9	F
		WB R	14.5	B	12.5	B
		WB Approach	**88.6**	**F**	**896.5**	**F**
		NB L	9.4	A	19.8	C
		SB L	12.4	B	10.8	B
		Intersection	3.4	-	55.7	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	39.9	D	62.7	**E**
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	10.1	B	8.2	A
		SB L	142.4	F	22.2	C
		SB R	12.7	B	11.1	B
		SB Approach	**71.1**	**F**	**14.7**	**B**
		Intersection	12.7	-	4.2	-
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	21.0	C	28.6	C
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	EB L+T	31.0	D	46.4	**E**
		EB R	13.2	B	13.7	B
		EB Approach	**26.4**	**D**	**32.5**	**D**
		WB L+T+R	24.0	C	37.2	**E**
		NB L+T	9.3	A	9.2	A
		SB L+T	8.2	A	8.6	A
		Intersection	2.8	-	4.7	-

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

While the approach delays are reduced significantly, the addition of right turn lanes on both the eastbound and westbound approaches only improves the LOS on the eastbound approach during the AM peak hour to LOS E. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

The lane additions described previously help to improve the LOS from F to E in the PM peak hour.

Walt Stephens Rd at Spivey Rd

While the approach delay is reduced significantly, the addition of a right turn lane on the southbound approach does not improve the approach LOS beyond F in the AM peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Flippen Rd at Walt Stephens Rd/Red Oak Rd
The lane additions described previously help to improve the LOS from F to C in the PM peak hour.

Rock Quarry Rd at Red Oak Rd
The addition of a right turn lane on the eastbound approach improves the approach LOS to D in both peak hours. The LOS is improved further by the addition of northbound left and through lanes, helping to create more desirable gaps in traffic for vehicles on the side streets to accept.

2.7 Existing Segment Analysis

A segment capacity analysis was performed for all study roadway segments using HCS 7. The results of the segment analysis are summarized in Table 7. HCS 7 output files are included in APPENDIX D**.**

Table 7: Existing Segment Capacity Analysis

#	Segment	From	To	AM		PM	
				NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	C	C	D	**E**
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	C	B	C	D
3	Banks Rd	Flippen Rd	Rock Quarry Rd	C	B	C	B
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd	C	D	C	C
5	SR 42/US 23/ N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd	D	C	C	D
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	B	C	D	C
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	B	C	C	C
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	B	C	D	C
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	B	C	D	C
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	B	C	C	B
11	SR 138/Stockbridge Rd	Walter Way	SR 42/US 23/N Henry Blvd	A	B	C	B
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	A	B	D	B
13	SR 138/Stockbridge Rd	Davidson Pkwy	Daniel Dr	B	B	C	B
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	B	C	D	C
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	C	B	D	C
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	B	C	C	C
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	B	C	C	C
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	B	C	C	C
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	C	B	D	C
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	C	B	C	D
21	SR 138/Lake Spivey Pkwy	Spivey Rd	Speer Rd/Mt Zion Pkwy	B	B	B	B
22	Davidson Pkwy	SR 138/Stockbridge Rd	SR 42-138/US 23/N Henry Blvd	A	B	B	B
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	D	B	C	D
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	B	A	A	A
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd	A	A	B	A
26	Walt Stephens Rd	Brentwood Pkwy/Monarch Village Way	Flippen Rd	D	D	D	C
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	C	D	**E**	C
28	Walt Stephens Rd	Spivey Rd	Speer Rd/Blackhall Rd	B	C	C	B

All existing roadway segments operate at LOS D or better for all peak hours and directions, with the exceptions of the southbound direction on Flippen Road from Banks Road to Walt Stephens Road/Red Oak Road during the PM peak hour and the eastbound direction on Walt Stephens Road from Speer Road/Blackhall Road to Brentwood Parkway/Monarch Village Way during the PM peak hour. However, since the existing LOS is E at these locations, that is the standard LOS for Background and Build conditions.

3 Background Conditions

3.1 Background Traffic Growth

Background traffic growth is the analysis method of analyzing historic trends in traffic volumes, population growth, and future growth projections to determine an annual growth rate which is applied to the existing traffic counts on the study network. A growth rate of 2% was determined and approved for analysis during the DRI Pre-Review Meeting on April 18, 2019.

The following intersection approaches and departures were assumed to be fully built out and therefore were not applied the 2% growth rate:

- SR 42-138/US 23/North Henry Boulevard at Davidson Parkway – east leg (Walmart/commercial driveway)
- SR 42-138/US 23/North Henry Boulevard at SR 138/Stockbridge Road/Walmart driveway – east leg (Walmart primary driveway)
- SR 138/Stockbridge Road at Walter Way – north leg (commercial driveway)
- SR 138/Stockbridge Road at Daniel Drive – south leg (commercial driveway)
- SR 138/Stockbridge Road at Davidson Parkway – north leg (serves commercial and fully built-out residential development)
- SR 138/Lake Spivey Parkway at Hannover Parkway – north leg (serves commercial and no-outlet fully built-out residential development), south leg (serves commercial and no-outlet fully built-out residential development)
- SR 138/Lake Spivey Parkway at Mount Zion Road – south leg (commercial driveway)
- Walt Stephens Road at Brentwood Parkway/Monarch Village Way – north leg (no outlet fully built-out residential development), south leg (fully built-out no-outlet residential development)
- Flippen Road at Banks Road/Village Way – west leg (no outlet fully built-out residential development)
- Rock Quarry Road at Banks Road/Carrington Ridge – east leg (no-outlet fully built-out residential development)
- Rock Quarry Road at Red Oak Road/Red Oak Village – east leg (Red Oak Village driveway)
- Flippen Road at Fairhaven Road – east leg (no outlet fully built-out residential development)

There are no planned projects in the area which are expected to change the traffic patterns from existing conditions. The background turning movement volumes for 2029 are shown in Figure 6. The background turning movement volumes for 2035 are shown in Section 3.4 in Figure 7.

3.2 Background Lane Geometry

Background lane geometry is the same as existing conditions except for the following programmed improvements. Further information on these programmed improvements can be found in APPENDIX B.

- GDOT P.I. No. 322050 – SR 42 from 0.15 miles south of SR 138/Henry to I-675/Clayton. GDOT: "The project begins at the SR 138 intersection, north of Stockbridge, and extends 2.2 miles along SR 42/US 23 in a northwesterly direction to the concrete approach slab of the overpass structure carrying SR 42 over I-675. The project begins at MP 22.26 in Henry County and extends to the Clayton County line at MP 23.61 and then the project continues from MP 0 in Clayton County to I-675 northbound ramps at MP 0.89 in Clayton County."

- Currently, SR 42/US 23 from SR 138/Stockbridge Road to I-675 is a two-lane undivided roadway. The project will widen SR 42/US 23 from SR 138/Stockbridge Road to I-675 from two lanes to a four-lane median divided highway.
- At this time, the project is expected to be completed and open to traffic in the year 2022. Therefore, this project was considered in the lane geometry for Background Conditions in 2029 and 2035.
- The project includes the following improvements at the following two study intersections:
  - SR 42-138/US 23/North Henry Boulevard at SR 138/Stockbridge Road/Walmart
    - One Northbound through lane added
    - One Southbound right turn lane added
    - One Eastbound left turn lane added
  - SR 42/US 23/North Henry Boulevard at Valley Hill Road
    - One Northbound through lane added
    - One Southbound through lane added

- GDOT P.I. No 0015090 – Rock Quarry Road from Eagles Landing Pkwy to SR 42/SR 138. GDOT: "Rock Quarry Road project is a reconstruction project. Rock Quarry Road will be widened beginning at Eagles Landing Parkway north to SR 42/138. The total miles for the widening project is 2.60 in length. This project is located in the 13th Congressional District. Rock Quarry Road in Henry County is classified as an urban minor arterial. It is a two-lane north-south facility that connects motorists from SR 42 to Eagles Landing Parkway. Rock Quarry Road has intermittent turn lanes at various locations and has no continuous linear sidewalks. There are a large number of commercial and industrial businesses along the proposed project segment, as well as residential housing. This project is currently identified in the Atlanta Regional Commission's (ARC) Regional Transportation Plan (RTP), Plan 2040, and is included in the Transportation Improvement Program (TIP). This project is located within the Atlanta MPO boundary and is listed in the TIP as HE-161A."
  - Currently, Rock Quarry Road from Eagles Landing Parkway to SR 42-138 is a two-lane undivided roadway. The project will widen Rock Quarry Road from Eagles Landing Parkway to SR 42-138 from two lanes to a four-lane median divided highway.
  - At this time, the project is expected to be completed and open to traffic in the year 2024. Therefore, this project was considered in the lane geometry for Background Conditions in 2029 and 2035.
  - The project includes the following improvements at the following two study intersections:
    - Rock Quarry Road at Banks Road/Carrington Ridge
      - One Northbound through lane added, at the expense of the existing right turn lane
      - One Southbound through lane added
      - One Southbound right turn lane added
    - Rock Quarry Road at Red Oak Road/Red Oak Village driveway
      - The intersection will be transformed into an unsignalized Restricted Crossing U-Turn (RCUT) as part of the widening. The side street approaches will only be able to turn right and make a U-turn at a designated median opening. However, left turns from Rock Quarry Road will still be physically allowed.
      - One Northbound through lane added
      - One Northbound left turn lane added
      - One Southbound through lane added
      - One Southbound left turn lane added

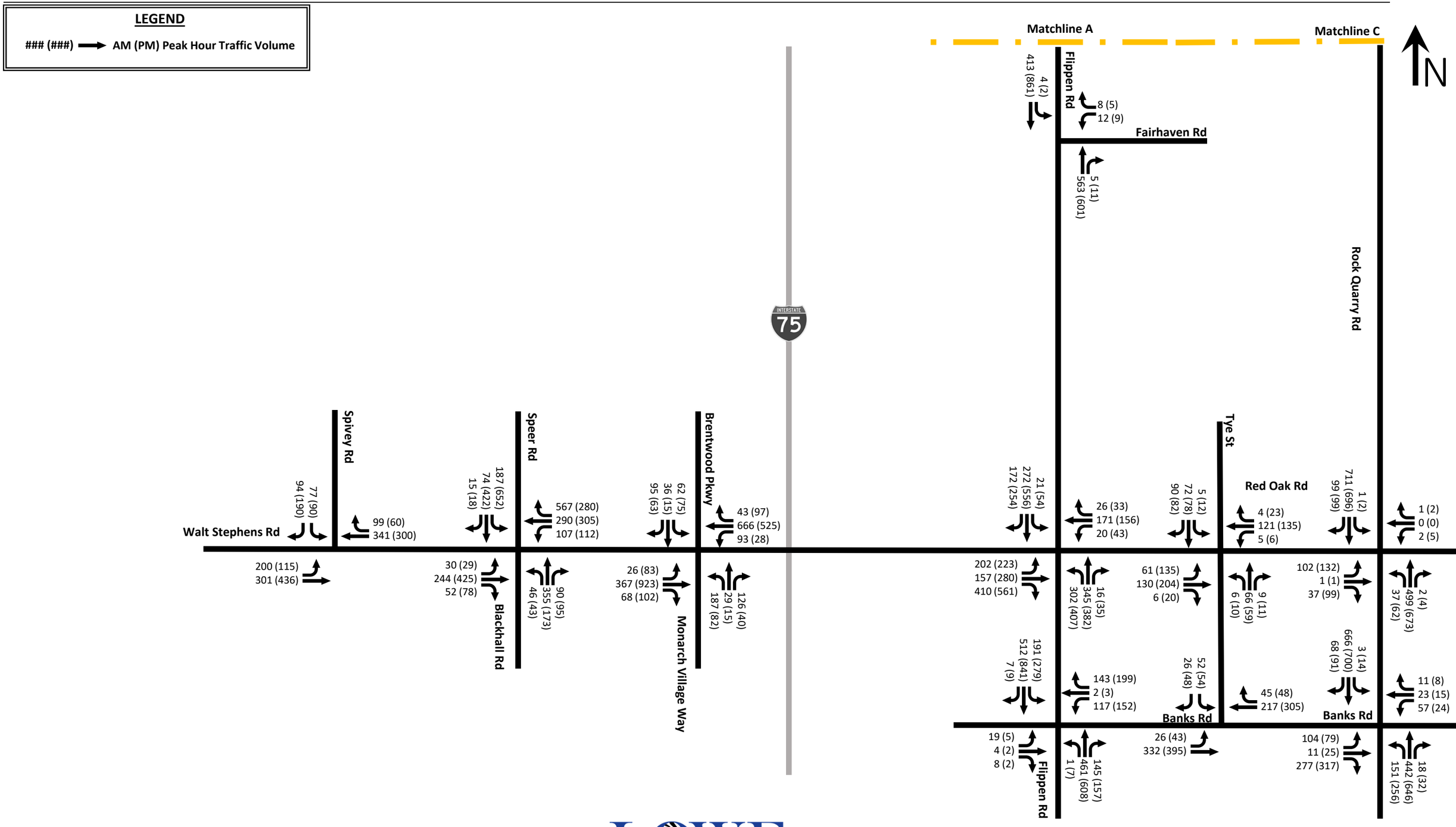
3.3 Background 2029

3.3.1 Background 2029 Capacity Analysis

The Background 2029 traffic volumes were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The existing geometry and programmed improvements described in Section 3.2 were employed for the intersection capacity analysis. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition was used for analysis. Table 8 shows the Background 2029 Capacity Analysis. Synchro output files are included in APPENDIX D**.**

All traffic signal timings remain the same as in existing conditions.

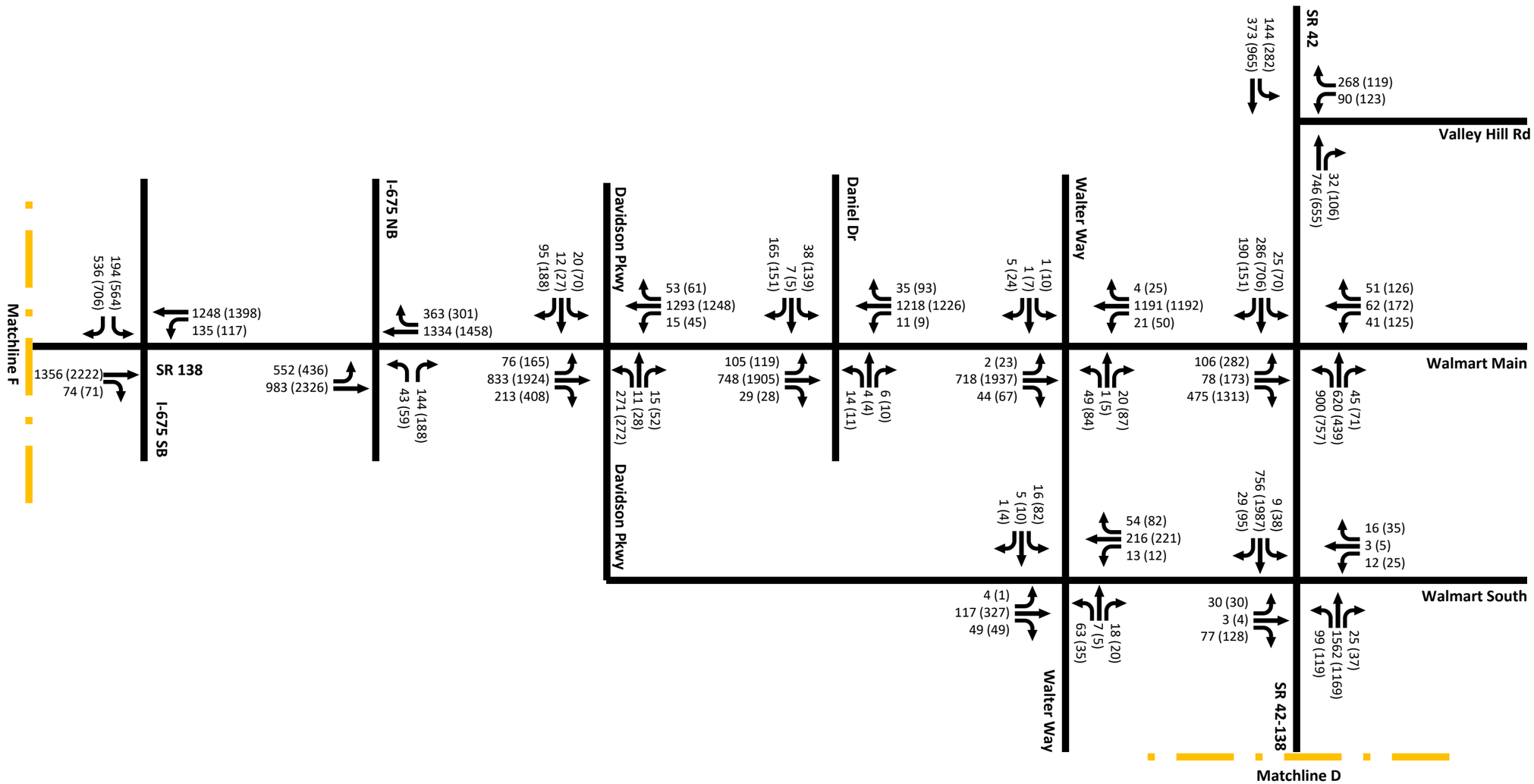
Reeves Creek DRI Background 2029 Traffic Volumes – Figure 6A



Reeves Creek DRI Background 2029 Traffic Volumes – Figure 6B

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume



Reeves Creek DRI Background 2029 Traffic Volumes – Figure 6C

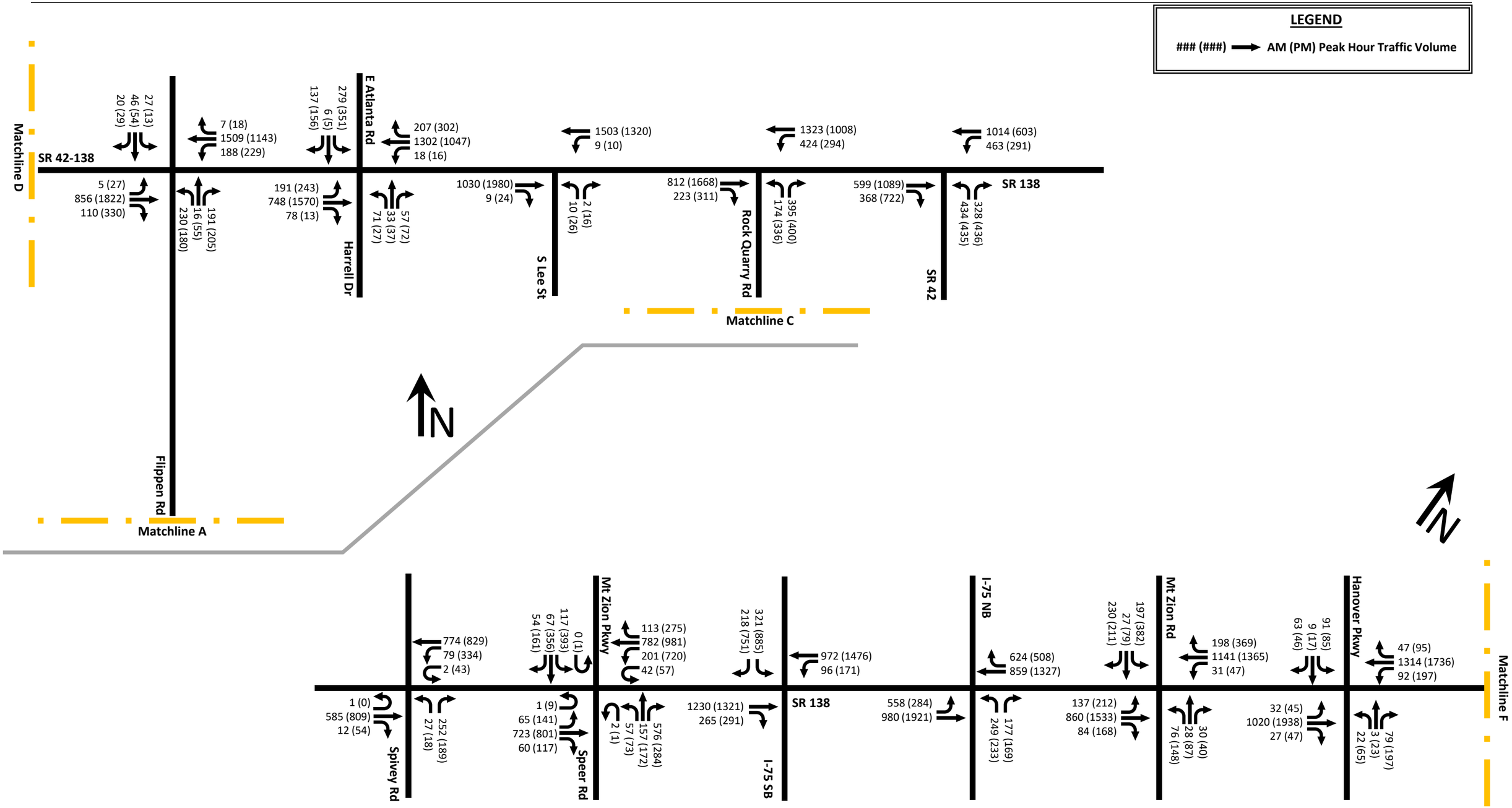


Table 8: Background 2029 Capacity Analysis

Intersection	Control	Lane Group Movement	Background 2029			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	69.5	E	125.7	F
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	43.6	D	45.7	D
SR 42-138/US 23/N Henry Blvd @ S Lee St	Traffic Signal	Intersection	1.0	A	1.5	A
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	93.4	F	79.3	E
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	35.7	D	116.6	F
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T+R	268.4	F	*	F
		WB L+T+R	387.9	F	*	F
		NB L	10.2	B	34.3	D
		SB L	14.7	B	12.1	B
		Intersection	16.3	-	1.2*	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	42.2	D	104.5	F
SR 42/US 23/N Henry Blvd @ Valley Hill Rd	Traffic Signal	Intersection	11.1	B	10.8	B
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	Intersection	5.5	A	24.7	C
SR 138/Stockbridge Rd @ Daniel Dr	Traffic Signal	Intersection	9.2	A	10.8	B
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	12.5	B	79.0	E
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	42.6	D	36.9	D
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	24.6	C	85.3	F
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	5.8	A	11.2	B
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	22.2	C	23.4	C
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	65.9	E	10.0	A
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	12.9	B	71.1	E
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	85.2	F	58.4	E
SR 138/Lake Spivey Pkwy @ Spivey Rd	Traffic Signal	Intersection	17.2	B	13.1	B
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	11.5	B	8.5	A
		SB L+R	1120.9	F	45.1	E
		Intersection	174.4	-	11.4	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	58.4	E	30.0	C
Walt Stephens Rd @ Monarch Village Way/Brentwood Pkwy	Traffic Signal	Intersection	27.7	C	18.8	B
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	36.9	D	128.0	F
Flippen Rd @ Banks Rd/Village Way	Traffic Signal	Intersection	18.5	B	15.0	B
Banks Rd @ Tye St	Side Street Stop Control	EB L	7.9	A	8.2	A
		SB L+R	14.8	B	16.8	C
		Intersection	2.0	-	2.3	-
Rock Quarry Rd @ Banks Rd/Carrington Ridge	Traffic Signal	Intersection	26.0	C	21.7	C
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	EB R	13.0	B	14.3	B
		WB R	10.1	B	11.1	B
		NB L	10.1	B	10.0	A
		SB L	8.6	A	9.4	A
		Intersection	1.4	-	2.1	-
Red Oak Rd @ Tye St	All-Way Stop Control	EB L+T+R	10.7	B	14.2	B
		WB L+T+R	9.5	A	10.0	A
		NB L+T+R	9.1	A	9.6	A
		SB L+T+R	9.7	A	10.4	B
		Intersection	**9.9**	**A**	**12.0**	**B**
Davidson Pkwy @ Walter Way	All-Way Stop Control	EB L	8.4	A	8.7	A
		EB T+R	9.2	A	15.6	C
		WB L	8.3	A	8.8	A
		WB T+R	10.6	B	12.8	B
		NB L+T+R	9.0	A	9.7	A
		SB L+T+R	8.6	A	10.4	B
		Intersection	**9.8**	**A**	**13.5**	**B**
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	WB L+R	18.1	C	31.4	D
		SB L	8.8	A	8.9	A
		Intersection	0.4	-	0.3	-

*actual value too high to calculate

The following intersections are expected to experience inadequate LOS in Background 2029 Conditions during one or both peak hours:

SR 138 at SR 42/US 23/N Henry Blvd

- The intersection LOS worsens from C to E during the AM peak hour and from E to F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- The intersection LOS worsens from D to F during the AM peak hour and from C to E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- The intersection LOS worsens from E to F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Both the eastbound and westbound single-lane shared approaches remain LOS F during both peak hours. As can be expected, the delay worsens significantly.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- The intersection LOS remains F during the PM peak hour as in Existing Conditions despite the programmed improvements.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy

- The intersection LOS worsens from D to E during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 SB

- The intersection LOS worsens from C to F during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB

- The intersection LOS worsens from C to E during the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB

- The intersection LOS worsens from D to E during the PM peak hour.

SR 138 at Speer Rd/Mt Zion Pkwy

- The intersection LOS worsens from D to F during the AM peak hour and from D to E during the PM peak hour.

Walt Stephens Rd at Spivey Rd

- Southbound single-lane shared approach remains LOS F during the AM peak hour and worsens from C to F during the PM peak hour. As can be expected, the delay worsens significantly during the AM peak hour.
- Delay in the AM peak hour is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

Walt Stephens Rd at Speer Rd/Blackhall Rd

- The intersection LOS worsens from C to E during the AM peak hour; however, the delay is 58.4 seconds, which is only 3.4 seconds beyond LOS D.

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- The intersection LOS remains F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

3.3.2 Background 2029 Capacity Analysis Required Improvements

Improvements were identified for intersections with inadequate LOS in Background 2029 Conditions. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing. The results of the Background 2029 Conditions Required Improvements capacity analysis are shown in Table 9.

All traffic signal timings remain the same as in Background 2029 Conditions, except for the following intersections:

- SR 42-138/US 23/North Henry Boulevard at SR 138/Stockbridge Road and Walmart driveway
  - Changed side street phasing from split phasing to leading protected+permissive left turns.
- SR 138/Stockbridge Road at Davidson Parkway
  - Changed side street phasing from split phasing to permissive phasing due to proposed geometry change on northbound approach from shared left+through+right to shared through+right.
- Any intersection proposed to go from a single lane left turn to two or more left turn lanes received protected only left turn phasing for that approach.

The following improvements are needed for Background 2029 Conditions:

SR 138 at SR 42/US 23/N Henry Blvd

- Add 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- Add 1 WBR lane, 1 SBL lane

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- Add 1 EBR lane, 1 NBL lane

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Add 1 EBR lane, 1 WBR lane, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- Changed phasing from split phasing on side streets to protected+permissive left turns followed by permissive left turns and through movements.

SR 138/Stockbridge Rd at Davidson Pkwy

- Change Northbound approach geometry from NBL/NB L+T+R to NBL/NB T+R, add 1 SBR lane.

SR 138/Lake Spivey Pkwy at I-675 SB

- Add 1 EBT lane, 1 EBR lane

SR 138/Lake Spivey Pkwy at I-75 NB

- Add 1 NBL lane

SR 138/Lake Spivey Pkwy at I-75 SB

- Add 1 SBR lane

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy

- Add 1 NBR lane

Walt Stephens Rd at Spivey Rd

- Add 1 SBR lane, 1 EBL lane, 1 WBR lane

Walt Stephens Rd at Speer Rd/Blackhall Rd

- Add 1 WBR lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- Make EBR free flow right turn lane (add lane on Flippen Rd south of intersection)

Table 9: Background 2029 Capacity Analysis with Improvements

Intersection	Control	Lane Group Movement	Background 2029 Improved			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	33.5	C	74.1	**E**
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	53.1	D	39.0	D
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	21.6	C	47.1	D
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T	391.8	F	*	F
		EB R	11.9	B	40.5	**E**
		EB Approach	**125.9**	F	*	F
		WB L+T	543.2	F	*	F
		WB R	17.0	C	14.0	B
		WB Approach	**271.6**	F	*	F
		NB L	10.2	B	34.3	D
		SB L	14.7	B	12.1	B
		Intersection	8.9	-	1.2*	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	36.4	D	71.3	**E**
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	10.2	B	25.9	C
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	20.7	C	26.9	C
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	45.8	D	9.0	A
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	10.5	B	35.2	D
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	38.1	D	46.0	D
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	11.5	B	8.5	A
		SB L	640.5	F	35.0	**E**
		SB R	14.7	B	12.2	B
		SB Approach	**296.5**	F	**19.5**	**C**
		Intersection	47.7	-	5.4	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	21.1	C	29.3	C
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	26.4	C	47.1	D

SR 138 at SR 42/US 23/N Henry Blvd

The required 2029 Background conditions improvements described above help to improve the LOS from F to E in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

The required 2029 Background conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from E to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

The required 2029 Background conditions improvements described above help to improve the LOS from F to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy
While the approach delays are reduced significantly, the addition of right turn lanes on both the eastbound and westbound approaches do not improve the LOS beyond F on either approach during either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy
The required 2029 Background conditions improvements described above help to improve the LOS from F to E in the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy
The required 2029 Background conditions improvements described above help to improve the LOS from E to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 SB
The required 2029 Background conditions improvements described above help to improve the LOS from F to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB
The required 2029 Background conditions improvements described above help to improve the LOS from E to D in the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB
The required 2029 Background conditions improvements described above help to improve the LOS from E to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy
The required 2029 Background conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from E to D in the PM peak hour.

Walt Stephens Rd at Spivey Rd
While the approach delay is reduced significantly, the addition of a right turn lane on the southbound approach does not improve the approach LOS beyond F in the AM peak hour; however, in the PM peak hour, the southbound left turn movement LOS is E, but the overall southbound approach LOS is C. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Walt Stephens Rd at Speer Rd/Blackhall Rd
The required 2029 Background conditions improvements described above help to improve the LOS from E to C in the AM peak hour.

Flippen Rd at Walt Stephens Rd/Red Oak Rd
The required 2029 Background conditions improvements described above help to improve the LOS from F to D in the PM peak hour.

3.3.3 Background 2029 Segment Analysis

A segment capacity analysis was performed for all study roadway segments using HCS 7 software and HCM 6th Edition methodology. The existing geometry and programmed improvements described in Section 3.2 were employed for the segment analysis. The results of the segment analysis are summarized in Table 10. HCS 7 output files are included in APPENDIX D.

Table 10: Background 2029 Segment Capacity Analysis

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	D	D	D	**E**
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	C	C	D	**E**
3	Banks Rd	Flippen Rd	Rock Quarry Rd	C	B	C	C
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd	A	A	A	A
5	SR 42/US 23/ N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd	B	A	B	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	B	D	**E**	C
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	B	D	D	C
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	C	D	**E**	D
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	B	C	D	C
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	B	D	D	C
11	SR 138/Stockbridge Rd	Walter Way	SR 42/US 23/N Henry Blvd	A	C	D	C
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	B	C	D	C
13	SR 138/Stockbridge Rd	Davidson Pkwy	Daniel Dr	B	C	D	C
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	B	C	**E**	D
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	C	C	**E**	C
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	C	C	D	D
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	C	C	D	C
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	C	D	D	D
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	C	C	D	C
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	D	C	C	D
21	SR 138/Lake Spivey Pkwy	Spivey Rd	Speer Rd/Mt Zion Pkwy	B	B	B	B
22	Davidson Pkwy	SR 138/Stockbridge Rd	SR 42-138/US 23/N Henry Blvd	A	B	C	C
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	**E**	B	C	**E**
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	C	B	A	B
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd	B	A	C	A
26	Walt Stephens Rd	Brentwood Pkwy/Monarch Village Way	Flippen Rd	D	D	**E**	C
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	C	**E**	**E**	C
28	Walt Stephens Rd	Spivey Rd	Speer Rd/Blackhall Rd	B	C	C	B

The following segments are expected to experience inadequate LOS in Background 2029 Conditions during one or both peak hours:

Flippen Rd from Banks Rd to Walt Stephens Rd/Red Oak Rd

- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour in the southbound direction.

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from E Atlanta Rd/Harrel Dr to S Lee St

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The segment is expected to operate at LOS E during the AM peak hour in the northbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.

Walt Stephens Rd from Brentwood Pkwy/Monarch Village Way to Flippen Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The segment is expected to operate at LOS E during the AM peak hour in the westbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.
- LOS standard for Background and Build conditions is E during the PM peak hour in the eastbound direction.

3.3.4 Background 2029 Segment Analysis Required Improvements

At roadway segments that are expected to experience inadequate LOS in Background 2029 conditions, one lane was added to mitigate the inadequate LOS. The results of the Background 2029 Segment Analysis with Improvements are shown below in Table 11.

Table 11: Background 2029 Segment Analysis with Improvements

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	-	A	-	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	A	-	C	-
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	B	-	C	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	B	-	C	-
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	B	-	D	-
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	B	A	A	B
26	Walt Stephens Rd	Brentwood Pkwy/Monarch Village Way	Flippen Rd	A	-	B	-
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	-	B	-	A

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from E Atlanta Rd/Harrel Dr to S Lee St

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The LOS in the northbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Brentwood Pkwy/Monarch Village Way to Flippen Rd

- The LOS in the eastbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The LOS in the westbound direction is expected to improve from E to B during the AM peak hour.

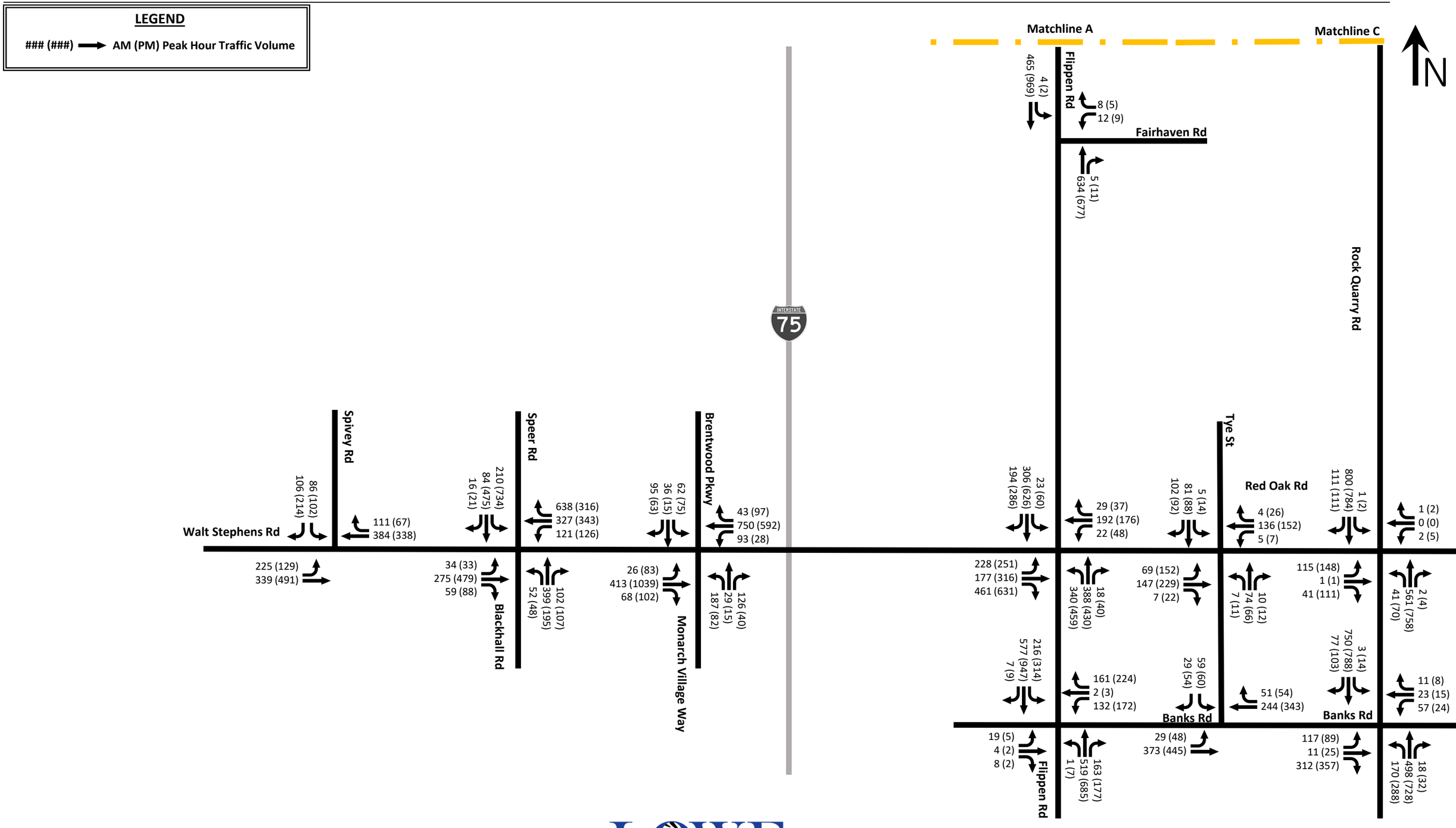
3.4 Background 2035

3.4.1 Background 2035 Capacity Analysis

The Background 2035 traffic volumes were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The existing geometry and programmed improvements described in Section 3.2 were employed for the intersection capacity analysis. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition was used for analysis. Table 12 shows the Background 2035 Capacity Analysis. Synchro output files are included in APPENDIX D**.**

All traffic signal timings remain the same as in existing conditions.

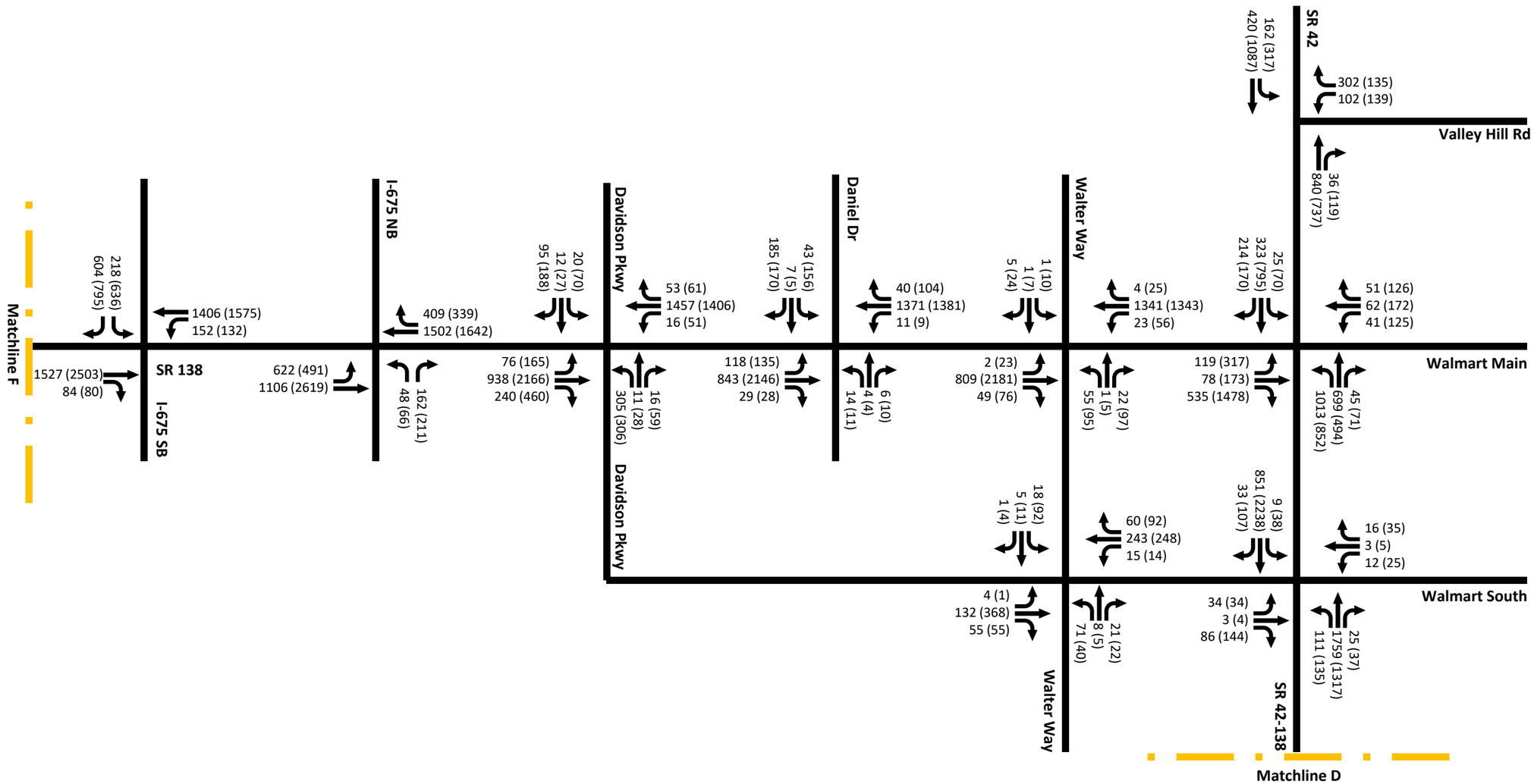
Reeves Creek DRI Background 2035 Traffic Volumes – Figure 7A



Reeves Creek DRI Background 2035 Traffic Volumes – Figure 7B

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume



Reeves Creek DRI Background 2035 Traffic Volumes – Figure 7C

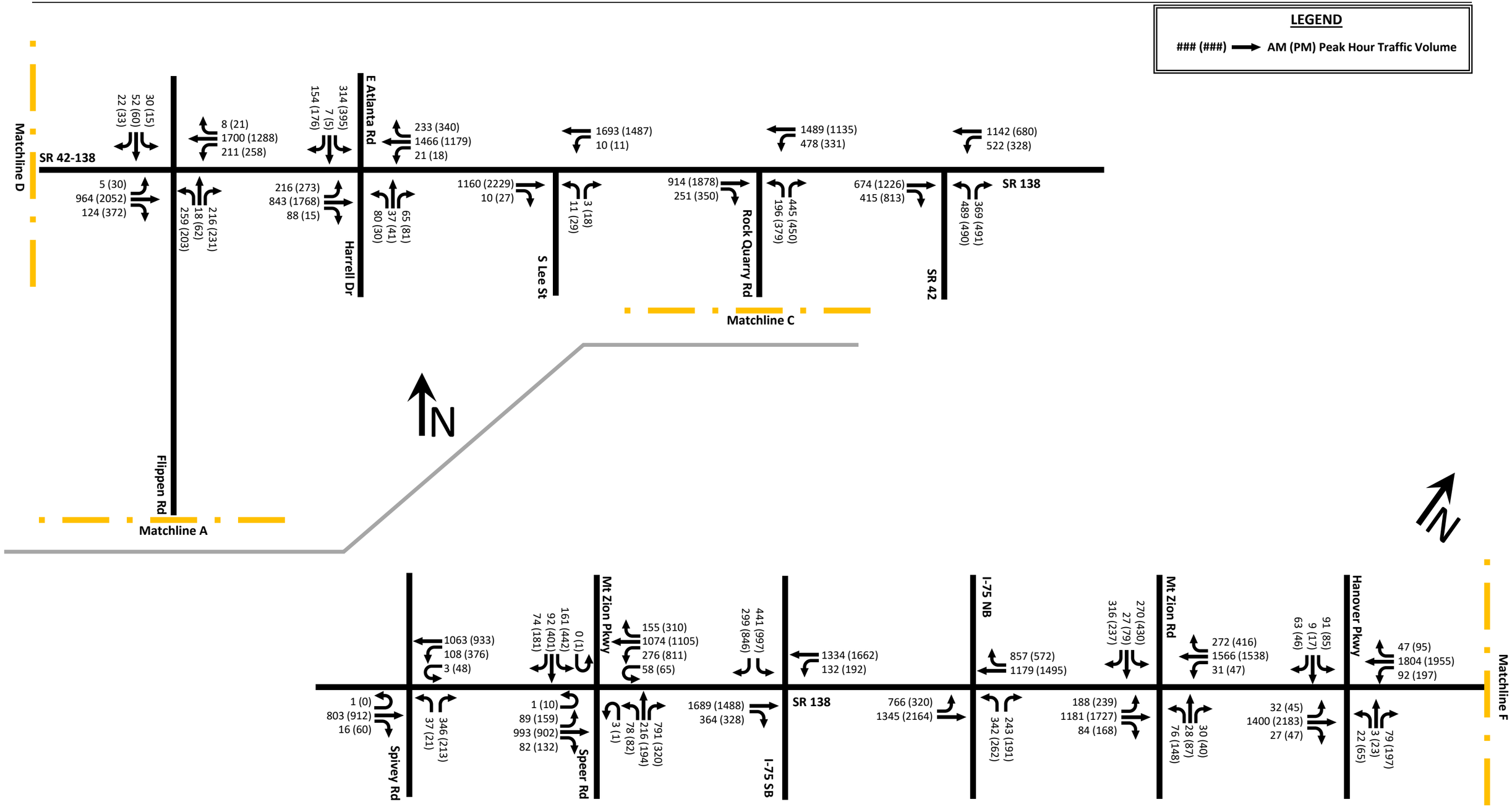


Table 12: Background 2035 Capacity Analysis

Intersection	Control	Lane Group Movement	Background 2035			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	100.9	E	173.6	F
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	59.4	E	84.6	F
SR 42-138/US 23/N Henry Blvd @ S Lee St	Traffic Signal	Intersection	1.1	A	1.6	A
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	133.0	F	125.7	F
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	55.0	D	162.1	F
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T+R	777.8	F	18046.7	F
		WB L+T+R	1061.6	F	*	F
		NB L	10.9	B	64.9	F
		SB L	16.7	C	13.2	B
		Intersection	44.2	-	799.9	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	50.4	D	140.5	F
SR 42/US 23/N Henry Blvd @ Valley Hill Rd	Traffic Signal	Intersection	11.7	B	11.8	B
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	Intersection	6.4	A	32.6	C
SR 138/Stockbridge Rd @ Daniel Dr	Traffic Signal	Intersection	10.2	B	26.2	C
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	14.3	B	117.9	F
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	70.2	E	81.5	F
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	42.4	D	133.1	F
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	5.5	A	11.1	B
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	32.0	C	46.1	D
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	97.7	F	11.0	B
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	18.6	B	102.1	F
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	123.6	F	68.5	E
SR 138/Lake Spivey Pkwy @ Spivey Rd	Traffic Signal	Intersection	23.2	C	15.9	B
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	13.1	B	8.7	A
		SB L+R	2947.9	F	114.6	F
		Intersection	454.8	-	27.8	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	84.9	F	47.8	D
Walt Stephens Rd @ Monarch Village Way/Brentwood Pkwy	Traffic Signal	Intersection	39.3	D	24.7	C
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	54.7	D	161.1	F
Flippen Rd @ Banks Rd/Village Way	Traffic Signal	Intersection	19.4	B	16.7	B
Banks Rd @ Tye St	Side Street Stop Control	EB L	8.0	A	8.3	A
		SB L+R	16.8	C	19.8	C
		Intersection	2.2	-	2.6	-
Rock Quarry Rd @ Banks Rd/Carrington Ridge	Traffic Signal	Intersection	31.5	C	25.8	C
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	EB R	12.0	B	12.6	B
		WB R	10.2	B	11.0	B
		NB L	10.6	B	10.5	B
		SB L	8.7	A	9.3	A
		Intersection	1.4	-	2.1	-
Red Oak Rd @ Tye St	All-Way Stop Control	EB L+T+R	11.9	B	17.3	C
		WB L+T+R	10.2	B	10.9	B
		NB L+T+R	9.7	A	10.2	B
		SB L+T+R	10.5	B	11.4	B
		Intersection	**10.8**	**B**	**13.9**	**B**
Davidson Pkwy @ Walter Way	All-Way Stop Control	EB L	8.5	A	8.8	A
		EB T+R	9.6	A	19.4	C
		WB L	8.5	A	9.1	A
		WB T+R	11.5	B	14.7	B
		NB L+T+R	9.3	A	10.3	B
		SB L+T+R	8.8	A	11.1	B
		Intersection	**10.4**	**B**	**16.0**	**C**
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	WB L+R	20.8	C	40.8	E
		SB L	9.1	A	9.2	A
		Intersection	0.4	-	0.3	-

*actual value too high to calculate

The following intersections are expected to experience inadequate LOS in Background 2035 Conditions during one or both peak hours:

SR 138 at SR 42/US 23/N Henry Blvd

- The intersection LOS worsens from C to E during the AM peak hour and from E to F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd

- The intersection LOS worsens from C to E during the AM peak hour and from C to F during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- The intersection LOS worsens from D to F during the AM peak hour and from C to F during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- The intersection LOS worsens from E to F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Both the eastbound and westbound shared left+through+right movements remain LOS F during both peak hours.
- Northbound left turn movement LOS worsens from C to F.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- The intersection LOS remains F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy

- The intersection LOS worsens from D to F during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 NB

- The intersection LOS worsens from C to E during the AM peak hour and from B to F during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 SB

- The intersection LOS worsens from C to F during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB

- The intersection LOS worsens from C to F during the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB

- The intersection LOS worsens from D to F during the PM peak hour.

SR 138 at Speer Rd/Mt Zion Pkwy

- The intersection LOS worsens from D to F during the AM peak hour and from D to E during the PM peak hour.

Walt Stephens Rd at Spivey Rd

- Southbound left+right movement LOS remains LOS F during the AM peak hour and worsens from C to F during the PM peak hour.
- Delay in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

Walt Stephens Rd at Speer Rd/Blackhall Rd

- The intersection LOS worsens from C to F during the AM peak hour.

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- The intersection LOS remains F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

Flippen Rd at Fairhaven Rd

- The westbound shared left+right approach LOS worsens from C to E during the PM peak hour; however, the delay is 40.8 seconds, which is only 5.8 seconds beyond LOS D.

3.4.2 Background 2035 Capacity Analysis Required Improvements

Improvements were identified for intersections with inadequate LOS in Background 2035 Conditions. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing. The results of the Background 2035 Conditions Required Improvements capacity analysis are shown in Table 13.

All traffic signal timings remain the same as in Background 2035 Conditions, except for the following:

- SR 42-138/US 23/North Henry Boulevard at SR 138/Stockbridge Road and Walmart driveway
  - Changed side street phasing from split phasing to leading protected+permissive left turns
- SR 138/Stockbridge Road at Davidson Parkway
  - Changed side street phasing from split phasing to permissive phasing due to proposed geometry change on northbound approach from shared left+through+right to shared through+right.
- Any intersection proposed to go from a single lane left turn to two or more left turn lanes received protected only left turn phasing for that approach.

The following improvements are needed for Background 2035 Conditions:

SR 138 at SR 42/US 23/N Henry Blvd

- Add 1 EBR lane, 1 WBL lane, 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd

- Add 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- Add 1 EBL lane, 1 WBR lane, 1 NBL lane, 2 SBL lanes

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- Add 1 EBR lane, 1 NBL lane

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Add 1 EBR lane, 1 WBR lane, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- Add 1 EBT lane, 1 SBT lane

SR 138/Stockbridge Rd at Davidson Pkwy

- Add 1 EBT lane, 1 SBL lane

SR 138/Lake Spivey Pkwy at I-675 NB

- Add 1 EBT lane, 1 EBL lane, 1 NBR lane

SR 138/Lake Spivey Pkwy at I-675 SB

- Add 1 EBT, 1 EBR

SR 138/Lake Spivey Pkwy at I-75 NB

- Add 1 EBL lane, 1 WBR lane, 1 NBL lane

SR 138/Lake Spivey Pkwy at I-75 SB

- Add 1 SBR lane

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy

- Add 1 EBT lane, 1 WBT lane, 1 NBR lane

Walt Stephens Rd at Spivey Rd

- Add 1 EBL lane, 1 WBR lane, 1 SBR lane

Walt Stephens Rd at Speer Rd/Blackhall Rd

- Add 1 WBR lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- Make EBR free flow right turn lane (add lane on Flippen Rd south of intersection)

Flippen Rd at Fairhaven Rd

- Add 1 WBR lane

Table 13: Background 2035 Capacity Analysis with Improvements

Intersection	Control	Lane Group Movement	Background 2035 Improved			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	30.7	C	50.3	D
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	37.5	D	51.5	D
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	51.1	D	36.5	D
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	32.8	C	74.4	E
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T	910.9	F	24096.8	F
		EB R	12.7	B	74.2	F
		EB Approach	**282.9**	F	**5089.9**	F
		WB L+T	1343.2	F	20257.6	F
		WB R	19.2	C	15.2	C
		WB Approach	**659.8**	F	**9357.8**	F
		NB L	10.9	B	64.9	F
		SB L	16.7	C	13.2	B
		Intersection	19.2	-	374.8	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	36.2	D	62.9	E
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	13.1	B	22.8	C
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	28.2	C	21.5	C
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	22.9	C	34.7	C
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	29.2	C	12.7	B
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	20.2	C	36.1	D
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	39.8	D	47.7	D
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	13.1	B	8.7	A
		SB L	1390.2	F	56.5	F
		SB R	16.8	C	13.3	B
		SB Approach	**632.0**	F	**27.2**	D
		Intersection	99.3	-	7.2	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	25.1	C	46.7	D
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	35.8	D	79.2	E
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	WB L	24.8	C	54.2	F
		WB R	13.4	B	13.9	B
		WB Approach	**20.2**	**C**	**39.8**	E
		SB L	9.1	A	9.2	A
		Intersection	0.4	-	0.3	-

SR 138 at SR 42/US 23/N Henry Blvd
The required 2035 Background conditions improvements described above help to improve the LOS from E to C in the AM peak hour and from F to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd
The required 2035 Background conditions improvements described above help to improve the LOS from E to D in the AM peak hour and from F to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr
The required 2035 Background conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from F to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy
While the approach delays are reduced significantly, the addition of right turn lanes on both the eastbound and westbound approaches do not improve the LOS beyond F on either approach during either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy
The required 2035 Background conditions improvements described above help to improve the LOS from F to E in the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy
The required 2035 Background conditions improvements described above help to improve the LOS from F to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 NB
The required 2035 Background conditions improvements described above help to improve the LOS from E to C in the AM peak hour and from F to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 SB
The required 2035 Background conditions improvements described above help to improve the LOS from F to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB
The required 2035 Background conditions improvements described above help to improve the LOS from F to C in the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB
The required 2035 Background conditions improvements described above help to improve the LOS from F to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy
The required 2035 Background conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from E to D in the PM peak hour.

Walt Stephens Rd at Spivey Rd
While the approach delay is reduced significantly, the addition of a right turn lane on the southbound approach does not improve the approach LOS beyond F in the AM peak hour; however, in the PM peak hour, the southbound left turn movement LOS is F, but the overall southbound approach LOS is D. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Walt Stephens Rd at Speer Rd/Blackhall Rd
The required 2035 Background conditions improvements described above help to improve the LOS from F to C in the AM peak hour.

Flippen Rd at Walt Stephens Rd/Red Oak Rd
The required 2035 Background conditions improvements described above help to improve the LOS from F to E in the PM peak hour.

Flippen Rd at Fairhaven Rd
The lane additions described previously help to improve the westbound approach LOS from F to E in the PM peak hour. The addition of a right turn lane on the westbound approach does not improve the approach LOS beyond E in the PM peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

3.4.3 Background 2035 Segment Analysis
A segment capacity analysis was performed for all study roadway segments using HCS 7 software and HCM 6th Edition methodology. The existing geometry and programmed improvements described in Section 3.2 were employed for the segment analysis. The results of the segment analysis are summarized in Table 14. HCS 7 output files are included in APPENDIX D**.**

Table 14: Background 2035 Segment Analysis

#	Segment	From	To	AM		PM	
				NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	D	D	E	E
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	D	C	D	E
3	Banks Rd	Flippen Rd	Rock Quarry Rd	C	B	C	C
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd	A	B	B	B
5	SR 42/US 23/ N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd	B	A	B	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	B	D	E	C
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	C	D	D	C
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	C	D	E	D
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	C	D	E	D
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	C	D	E	C
11	SR 138/Stockbridge Rd	Walter Way	SR 42/US 23/N Henry Blvd	B	C	D	C
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	B	C	E	C
13	SR 138/Stockbridge Rd	Davidson Pkwy	Daniel Dr	B	C	D	C
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	C	D	E	D
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	D	C	F	C
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	C	D	D	D
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	C	D	D	D
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	C	D	D	D
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	D	C	E	D
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	D	C	D	E
21	SR 138/Lake Spivey Pkwy	Spivey Rd	Speer Rd/Mt Zion Pkwy	B	B	C	C
22	Davidson Pkwy	SR 138/Stockbridge Rd	SR 42-138/US 23/N Henry Blvd	A	C	C	C
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	E	B	C	E
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	C	B	B	B
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd	B	A	C	B
26	Walt Stephens Rd	Brentwood Pkwy/Monarch Village Way	Flippen Rd	E	E	E	D
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	C	E	E	D
28	Walt Stephens Rd	Spivey Rd	Speer Rd/Blackhall Rd	B	D	C	C

The following segments are expected to experience inadequate LOS in Background 2035 Conditions during one or both peak hours:

Flippen Rd from Banks Rd to Walt Stephens Rd/Red Oak Rd

- The segment is expected to operate at LOS E during the PM peak hour in both directions.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour in the southbound direction.

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.

SR 42-138/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/N Henry Blvd from Harrel Dr/E Atlanta Rd to S Lee St

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from S Lee St to Rock Quarry Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from Rock Quarry Rd to SR 42/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Stockbridge Rd from Daniel Dr to Walter Way

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The segment is expected to operate at LOS F during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-75 SB to I-75 NB

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from Speer Rd/Mt Zion Pkwy to I-75 SB

- The segment is expected to operate at LOS E during the PM peak hour in the westbound direction.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The segment is expected to operate at LOS E during the AM peak hour in the northbound direction and at LOS E during the PM peak hour in the southbound direction.

Walt Stephens Rd from Brentwood Pkwy/Monarch Village Way to Flippen Rd

- The segment is expected to operate at LOS E during both peak hours in the eastbound direction and at LOS E during the AM peak hour in the westbound direction.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The segment is expected to operate at LOS E during the AM peak hour in the westbound direction and at LOS E during the PM peak hour in the eastbound direction.

3.4.4 Background 2035 Segment Analysis Required Improvements

At roadway segments that are expected to experience inadequate LOS in Background 2035 conditions, one lane was added to mitigate the inadequate LOS. The results of the Background 2035 Segment Analysis with Improvements are shown below in Table 15.

Table 15: Background 2035 Segment Analysis with Improvements

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	A	-	B	-
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	-	A	-	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	A	-	D	-
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	B	-	D	-
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	B	-	C	-
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	B	-	C	-
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	A	-	C	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	B	-	D	-
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	C	-	D	-
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	C	-	C	-
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	-	B	-	C
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	B	A	A	B
26	Walt Stephens Rd	Brentwood Pkwy/Monarch Village Way	Flippen Rd	B	B	B	A
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	-	B	-	A

Flippen Rd from Banks Rd to Walt Stephens Rd/Red Oak Rd

- The LOS in the northbound direction is expected to improve from E to B during the PM peak hour.

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The LOS in the westbound direction is expected to improve from E to B during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from Harrel Dr/E Atlanta Rd to S Lee St

- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from S Lee St to Rock Quarry Rd

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from Rock Quarry Rd to SR 42/US 23/N Henry Blvd

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from Daniel Dr to Walter Way

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The LOS in the eastbound direction is expected to improve from F to D during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 SB to I-75 NB

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from Speer Rd/Mt Zion Pkwy to I-75 SB

- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The LOS in the northbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Brentwood Pkwy/Monarch Village Way to Flippen Rd

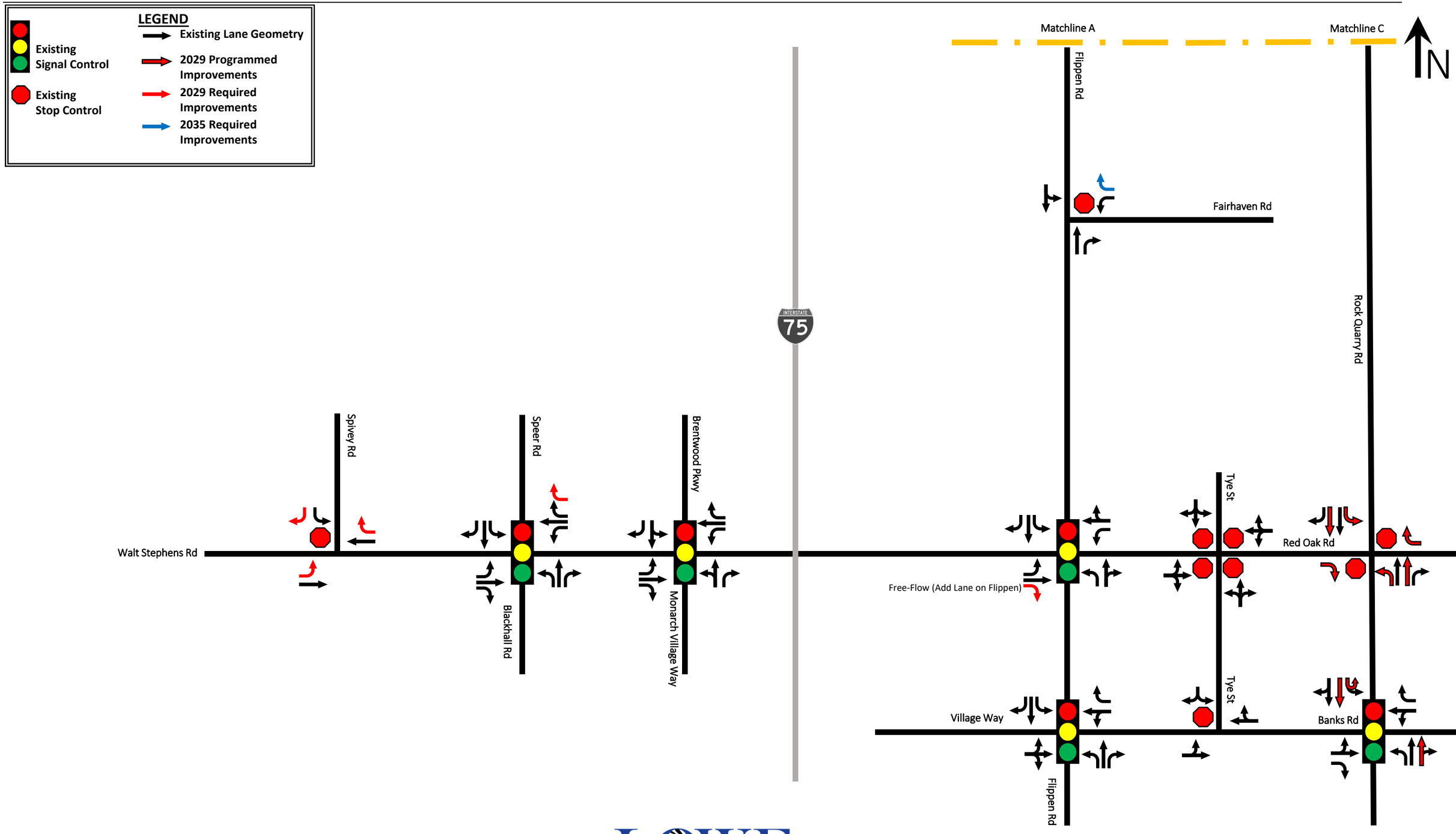
- The LOS in the eastbound direction is expected to improve from E to B during both peak hours.
- The LOS in the westbound direction is expected to improve from E to B during the AM peak hour.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

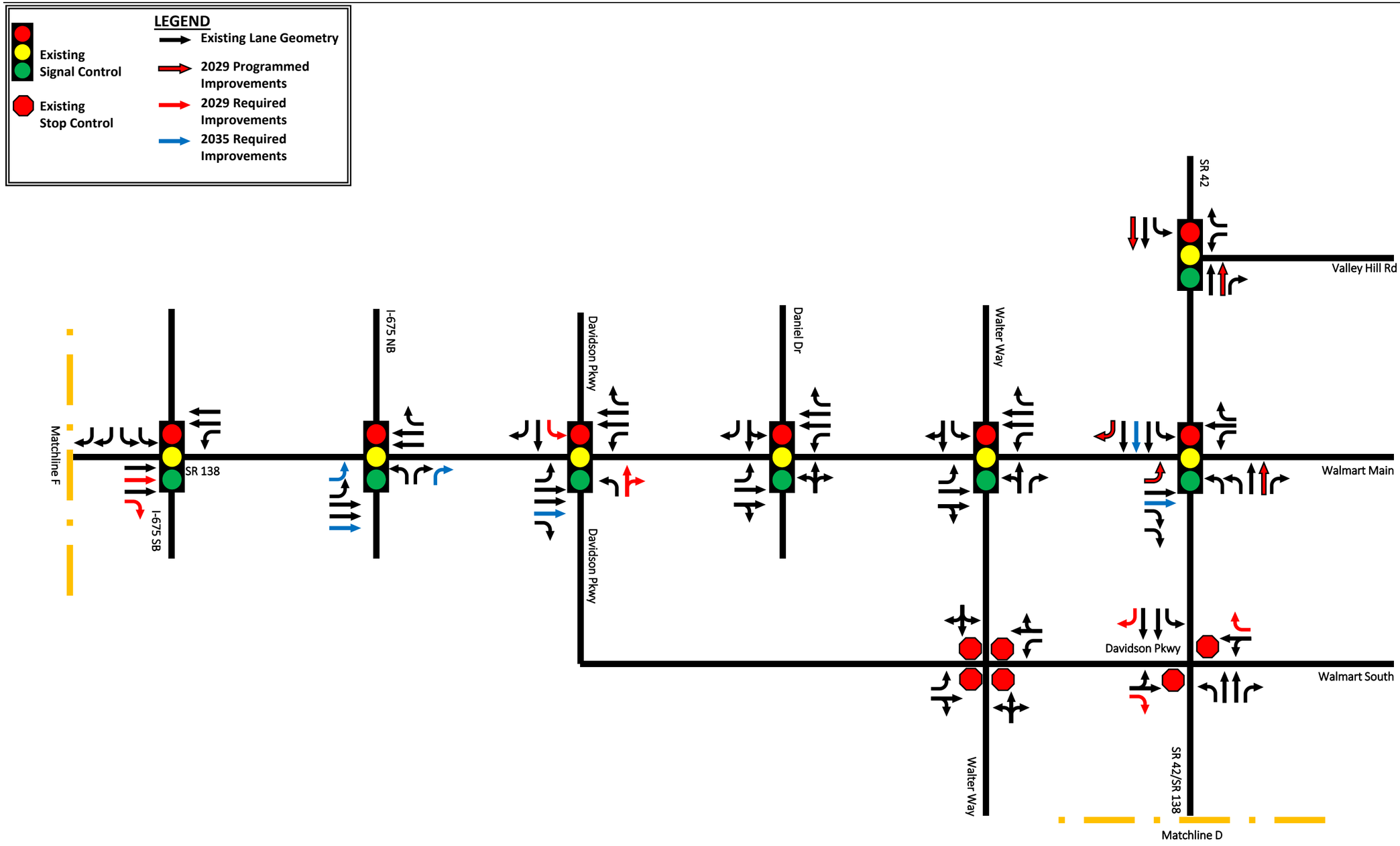
- The LOS in the westbound direction is expected to improve from E to B during the AM peak hour.

The proposed Background Lane Geometry for the years 2029 and 2035, including programmed and required improvements, is shown in Figure 8.

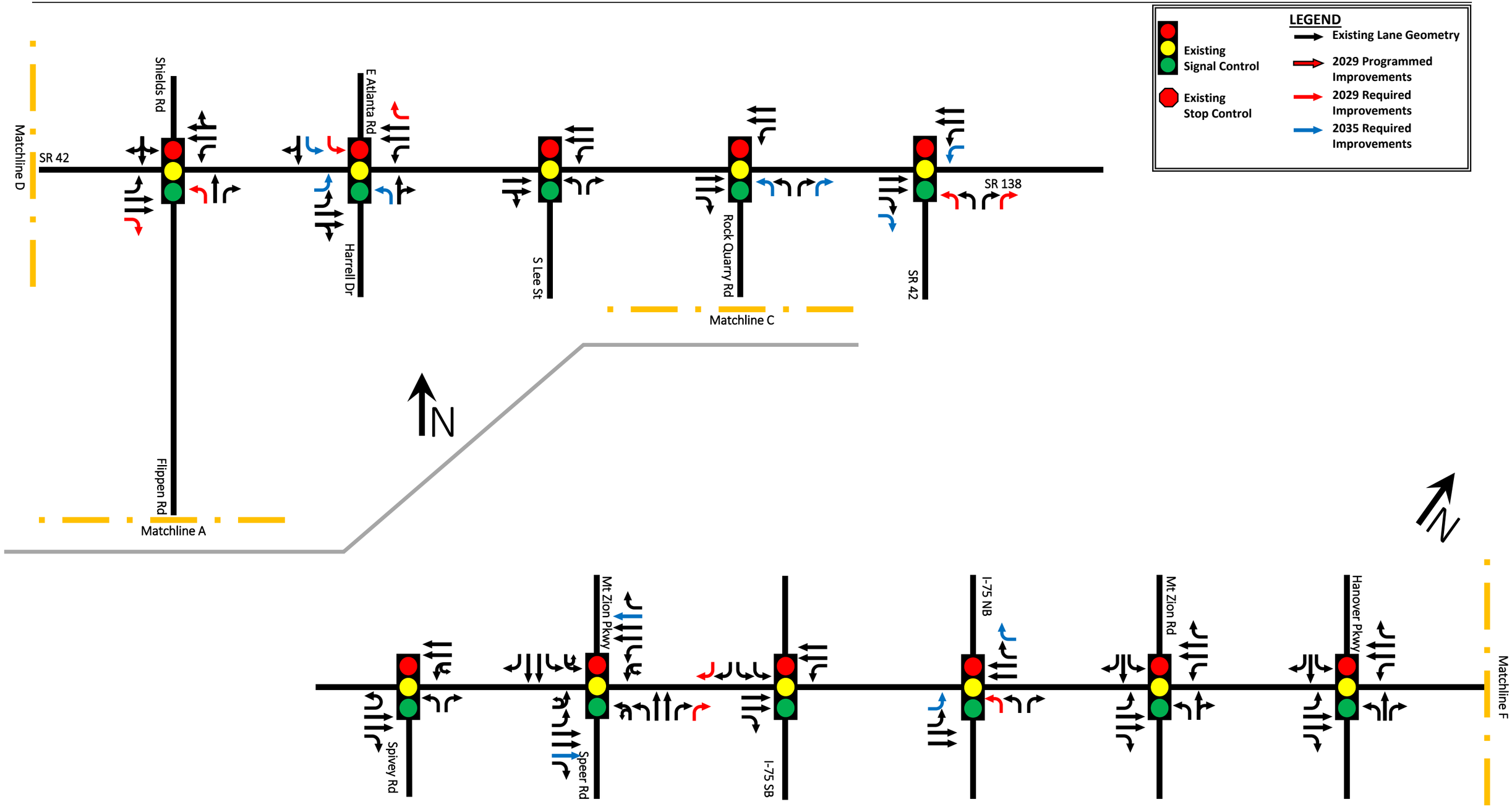
Reeves Creek DRI Background Lane Geometry – Figure 8A



Reeves Creek DRI Background Lane Geometry – Figure 8B



Reeves Creek DRI Background Lane Geometry – Figure 8C



4 Future Conditions

4.1 Trip Generation

A trip generation for the proposed development was created using the ITE Trip Generation Manual 10th Edition, 2017. The trip generation land use codes and descriptions are summarized directly from ITE; for example, the ITE Code and Description "150 – Warehousing" will more closely resemble office showroom space. Phase 1 (2029) is shown in Table 16 and the summarized trip generation for Phase 2 (2035, includes trip generation from Phase 1) is shown in Table 17. The data use for analysis is included in APPENDIX E.

Table 16: Trip Generation Summary – Phase 1 (2029)

ITE Code	ITE Project Land Use Description	Density	Variable	Daily			AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out	Total	In	Out
210	Single-Family Detached Housing	282	Dwelling Unit	2,699	1,350	1,349	205	51	154	275	173	102
221	Multifamily Housing (Mid-Rise)	1,003	Dwelling Unit	5,465	2,733	2,732	328	85	243	405	247	158
252	Senior Adult Housing—Attached	429	Dwelling Unit	1,699	850	849	86	30	56	105	58	47
310	Hotel	1,000	Rooms	10,863	5,432	5,431	495	292	203	724	369	355
460	Arena	247,000	1000 S.F.	1,562	781	781	138	119	19	175	28	147
710	General Office Building	620,000	1000 S.F.	6,228	3,114	3,114	609	524	85	644	103	541
760	Research and Development Center	100,000	1000 S.F.	1,228	614	614	42	32	10	53	8	45
820	Shopping Center	169,250	1000 S.F.	8,598	4,299	4,299	236	146	90	802	385	417
945	Gasoline/Service Station with Convenience Market	18	Pumps	3,671	1,836	1,835	245	125	120	252	129	123
150	Warehousing	150,000	1000 S.F.	283	142	141	43	33	10	46	12	34
			Total Trips	42,296	21,151	21,145	2,427	1,437	990	3,481	1,512	1,969
			Reductions for Internal Capture	8,267	4,134	4,133	190	95	95	718	359	359
			Reductions for Modal Split	896	447	449	59	46	13	71	22	49
			Reductions for Pass-By Trips	4,401	2,201	2,200	152	78	74	414	203	211
			Total Net New Project Trips	**28,732**	**14,369**	**14,363**	**2,026**	**1,218**	**808**	**2,278**	**928**	**1,350**

For Phase 1 in the year 2029, the proposed development is anticipated to generate a total of 42,296 daily vehicle trips (21,151 inbound, 21,145 outbound) with 2,427 AM peak hour vehicle trips (1,437 inbound, 990 outbound), and 3,481 PM peak hour trips (1,512 inbound, 1,969 outbound). After vehicle trip reductions the net anticipated new daily vehicle volume impacting the external roadway network is 28,732 daily vehicle trips (14,369 inbound, 14,363 outbound) with 2,026 AM peak hour vehicle trips (1,218 inbound, 808 outbound), and 2,278 PM peak hour trips (928 inbound, 1,350 outbound).

Table 17: Trip Generation Summary – Phase 2 (2035)

ITE Code	ITE Project Land Use Description	Density	Variable	Daily			AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out	Total	In	Out
210	Single-Family Detached Housing	282	Dwelling Unit	2,699	1,350	1,349	205	51	154	275	173	102
221	Multifamily Housing (Mid-Rise)	1,003	Dwelling Unit	5,465	2,733	2,732	328	85	243	405	247	158
252	Senior Adult Housing—Attached	429	Dwelling Unit	1,699	850	849	86	30	56	105	58	47
310	Hotel	1,000	Rooms	10,863	5,432	5,431	495	292	203	724	369	355
460	Arena	247,000	1000 S.F.	1,562	781	781	138	119	19	175	28	147
710	General Office Building	620,000	1000 S.F.	6,228	3,114	3,114	609	524	85	644	103	541
720	Medical-Dental Office Building	100,000	1000 S.F.	3,754	1,877	1,877	223	176	47	401	112	289
760	Research and Development Center	100,000	1000 S.F.	1,228	614	614	42	32	10	53	8	45
862	Home Improvement Superstore	100,000	1000 S.F.	3,074	1,537	1,537	157	89	68	233	114	119
820	Shopping Center	169,250	1000 S.F.	8,598	4,299	4,299	236	146	90	802	385	417
857	Discount Club	135,000	1000 S.F.	5,643	2,822	2,821	66	46	20	564	282	282
890	Furniture Store	125,000	1000 S.F.	693	347	346	31	22	9	51	24	27
945	Gasoline/Service Station with Convenience Market	18	Pumps	3,671	1,836	1,835	245	125	120	252	129	123
090	Park-and-Ride Lot with Bus or Light Rail Service Industrial	300	Lanes	917	459	458	119	84	35	143	36	107
150	Warehousing	150,000	1000 S.F.	283	142	141	43	33	10	46	12	34
			Total Trips	56,377	28,193	28,184	3,023	1,854	1,169	4,873	2,080	2,793
			Reductions for Internal Capture	12,229	6,115	6,114	252	126	126	1,139	569	570
			Reductions for Modal Split	1,051	529	522	70	55	15	88	25	63
			Reductions for Pass-By Trips	5,844	2,958	2,886	152	78	74	664	333	331
			Total Net New Project Trips	**37,253**	**18,591**	**18,662**	**2,549**	**1,595**	**954**	**2,982**	**1,153**	**1,829**

For Phase 2 in the year 2035, the proposed development is anticipated to generate a total of 56,377 daily vehicle trips (28,193 inbound, 28,184 outbound) with 3,023 AM peak hour vehicle trips (1,854 inbound, 1,169 outbound), and 4,873 PM peak hour trips (2,080 inbound, 2,793 outbound). After vehicle trip reductions the net anticipated new daily vehicle volume impacting the external roadway network is 37,253 vehicle trips (18,591 inbound, 18,662 outbound) with an AM peak hour vehicle volume of 2,549 vehicles (1,595 inbound, 954 outbound), and a PM peak hour vehicle volume of 2,982 vehicles (1,153 inbound, 1,829 outbound).

4.2 Trip Distribution

4.2.1 Trip Distribution – New Trips

The trip distribution for the proposed development was based on field observations, existing traffic counts and patterns, a review of land use densities in the area, and potential origination and destination points. Additionally, discussions with the local jurisdictions during the DRI Pre-Review Meeting on April 18, 2019 helped to determine the distribution of project trips on the study network. The development was distributed as a whole, and individual driveway volumes were determined based on the site layout and access. The proposed project trip distribution was approved during the DRI Pre-Review Meeting on April 18, 2019.

The Trip Distribution for Phase 1 and Phase 2 is shown graphically in Figure 9.

4.2.2 Internal Capture Reduction

Mixed-use developments that contain residential, retail, entertainment, office, and hotel land uses will generate trips that satisfy the total development's trip generation but will not access the site via the external roadway network. Internal trip capture is calculated using the guidance set forth in the ITE Trip Generation Handbook 3rd Edition, 2017 which utilizes the NCHRP 8-51 Internal Trip Capture Estimation tool. AM and PM peak hour trips utilize their respective tools; however, to estimate the daily internal capture, the PM worksheets were used with the daily traffic volumes. For Phase 1 in the year 2029, the total internal capture reduction is expected to be approximately 8% of the AM volumes, 21% of the PM volumes, and 20% of the daily volumes. For Phase 2 in the year 2035, the total internal capture reduction is expected to be approximately 8% of the AM volumes, 23% of the PM volumes, and 22% of the daily volumes.

For Phase 1 in the year 2029, the internal capture reduction is 8,267 daily vehicle trips (4,134 inbound, 4,133 outbound), 190 AM peak hour trips (95 inbound, 95 outbound), and 718 PM peak hour trips (359 inbound, 359 outbound). NCHRP worksheets are included in APPENDIX E.

For Phase 2 in the year 2035, the internal capture reduction is 12,229 daily vehicle trips (6,115 inbound, 6,114 outbound), 252 AM peak hour trips (126 inbound, 126 outbound), and 1,139 PM peak hour trips (569 inbound, 570 outbound). NCHRP worksheets are included in APPENDIX E.

4.2.3 Reductions for Modal Split

Due to the addition of bicycle and pedestrian facilities and a potential mass transit station/center by the development during Phase 2 (2035), some trips are anticipated to utilize these facilities and will not have an impact on the external roadway network. A 2% reduction for modal split was discussed and agreed upon at the DRI Pre-Review Meeting on April 18, 2019.

For Phase 1 in the year 2029, the modal split reduction is 896 daily vehicle trips (447 inbound, 449 outbound), 59 AM peak hour trips (46 inbound, 13 outbound), and 71 PM peak hour trips (22 inbound, 49 outbound.

For Phase 2 in the year 2035, the modal split reduction is 1,051 daily vehicle trips (529 inbound, 522 outbound), 70 AM peak hour trips (55 inbound, 15 outbound), and 88 PM peak hour trips (25 inbound, 63 outbound.

4.2.4 Pass-by Trip Reduction

Several of the proposed land uses are expected to attract trips as intermediate stops on the way from an origin to a primary trip destination without a route diversion. The pass-by trip generation rate is based on the ITE Trip Generation Handbook 3rd Edition, 2017. The handbook does not always provide rates for AM and daily pass-by trip generation. Where applicable, the rates not provided were estimated based on the PM peak hour rate.

For Phase 1 in the year 2029, the pass-by trip reduction is 4,401 daily vehicle trips (2,201 inbound, 2,200 outbound), 152 AM peak hour trips (78 inbound, 74 outbound), and 414 PM peak hour trips (203 inbound, 211 outbound).

For Phase 2 in the year 2035, the pass-by trip reduction is 5,844 daily vehicle trips (2,958 inbound, 2,886 outbound), 152 AM peak hour trips (78 inbound, 74 outbound), and 664 PM peak hour trips (333 inbound, 331 outbound).

Pass-by trip distribution for Phase 1 and Phase 2 is shown in Figure 10.

4.3 Build Traffic Volumes

Build traffic volumes include both the background volumes and the project trips that will be generated by the proposed development.

Total project trips for Phase 1 (2029) are shown in Figure 11. Total project trips for Phase 2 (2035) are shown in Figure 13.

Total build year traffic volumes for Phase 1 (2029) are shown graphically in Figure 12. Total build year traffic volumes for Phase 2 (2035) are shown graphically in Figure 14.

4.4 Turn Lane Analysis

4.4.1 Turn Lane Warrant Analysis

A turn lane warrant analysis for the proposed driveways accessing the external roadway network was performed per the NCHRP 457: Evaluating Intersection Improvement Recommendations. The NCHRP turn-lane warrants analyze the need for a turn lane by comparing the amount of turning vehicles with opposing and advancing traffic volumes. Full NCHRP worksheets are included in APPENDIX F.

All turn lanes at all driveways are warranted by Phase 1 (2029) based on peak hour traffic volumes, except for a southbound left turn lane on Flippen Road at Driveway 4/Driveway 5 in neither Phase 1 nor Phase 2. For the side street approaches where the initial turn lane warrant analysis indicates a single lane approach, improvements may be attempted in the Build Improved scenario(s) if one or more of the single lane approaches indicates an expected inadequate LOS.

- Flippen Rd at Fairhaven Road
    - 1 NBL lane, 1 NBR lane, 1 SBL lane, 1 SBR lane – **Warranted**
    - Eastbound approach and Westbound approach – **One** approach lane
- Flippen Rd at Driveway 2/Driveway 3
    - 1 NBL lane, 1 NBR lane, 1 SBR lane – **Warranted**
    - Eastbound approach and Westbound approach – **One** approach lane
- Davidson Pkwy at proposed Reeves Creek Pkwy/commercial Dwy
    - 1 NBL lane, 1 NBR lane, 1 SBL lane, 1 SBR lane – **Warranted**
    - Eastbound approach and Westbound approach – **Two** approach lanes
- Walt Stephens Rd at proposed* Reeves Creek Pkwy
    - 1 EBL lane, 1 WBR lane – **Warranted**
    - Southbound approach – **Two** approach lanes

4.4.2 Turn Lane Required Lengths

Turn lanes shall be designed per Henry County DOT's design specifications.

4.5 Signal Warrant Analysis

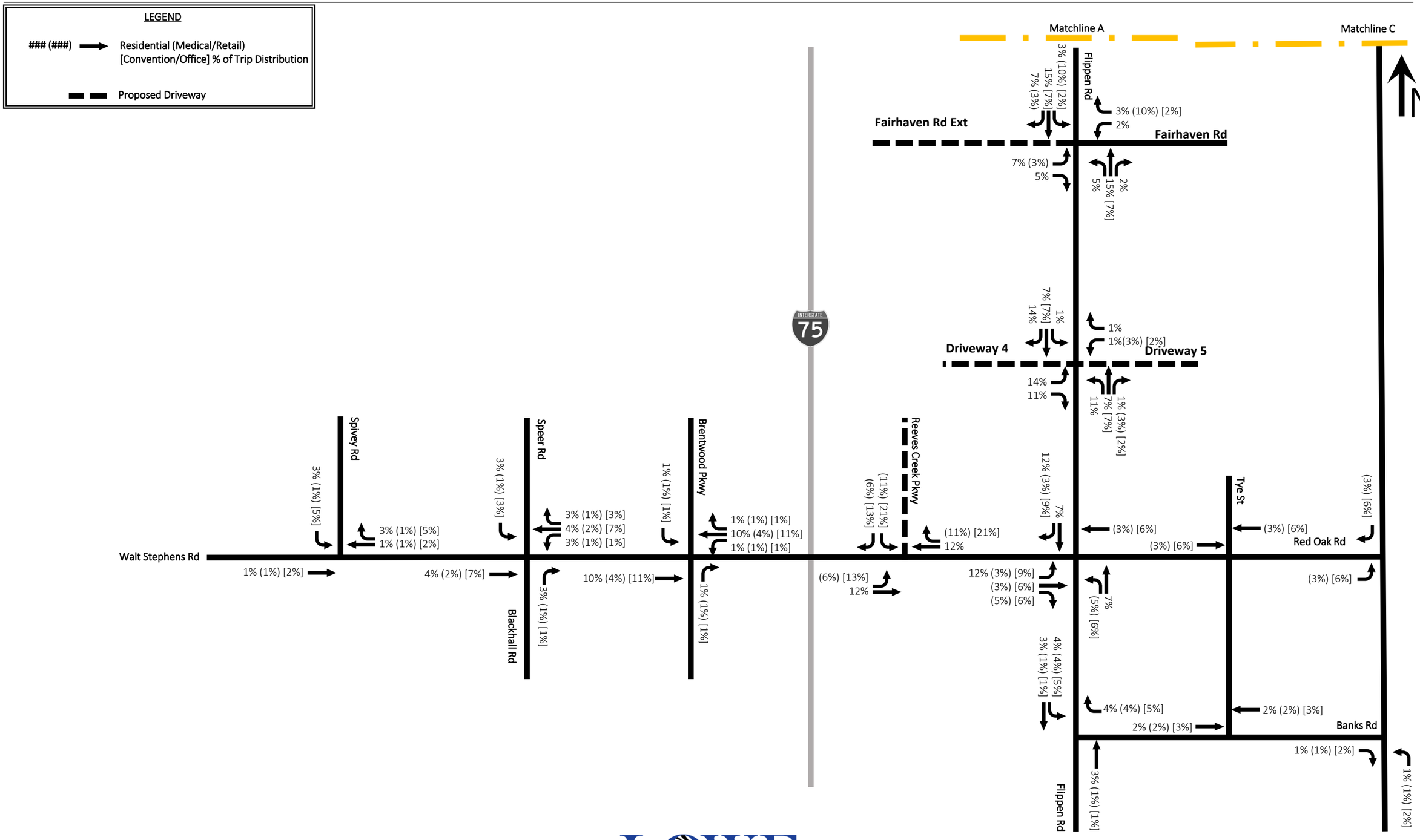
Traffic signal warrant analysis was performed at the intersection of Walt Stephens Road and the proposed Reeves Creek Parkway and at the intersection of Davidson Parkway and the proposed Reeves Creek Parkway per the Manual on Uniform Traffic Control Devices (MUTCD) traffic signal warrant guidelines. A 24-hour count was performed on Walt Stephens Road. A 13-hour turning movement count was performed at the intersection of Davidson Parkway and Walter Way, which is adjacent to the east of the proposed Davidson Parkway at Reeves Creek Parkway intersection. Traffic volumes were grown to Build Phase 1 (2029) based on the methodology previously stated. The project trip generated traffic volumes were distributed to the intersection based on the ITE Trip Generation Manual 10th Edition daily distribution for ITE Code 820 – Shopping Center.

Traffic signal warrants were analyzed using 100% traffic volume and a right-turn reduction.

At the intersection of Walt Stephens Road and the proposed Reeves Creek Parkway, based on the analysis, a traffic signal is **Warranted** by Warrants 1 (meets 10 hours in Condition A), 2 (meets 8 hours), and 3 (meets 2 hours) without the proposed I-75 northbound only interchange, which is the scenario that is expected to produce the lesser amount of traffic at this intersection. Full traffic signal warrant analysis, including the daily distribution of project trips at the study intersection, is provided in APPENDIX G.

At the intersection of Davidson Parkway and the proposed Reeves Creek Parkway, based on the analysis, a traffic signal is **Warranted** by Warrants 1 (meets 9 hours in Condition B), 2 (meets 7 hours), and 3 (meets 2 hours) with the proposed I-75 northbound only interchange, which is the scenario that is expected to produce the lesser amount of traffic at this intersection. Full traffic signal warrant analysis, including the daily distribution of project trips at the study intersection, is provided in APPENDIX G.

Reeves Creek DRI Trip Distribution – Figure 9A



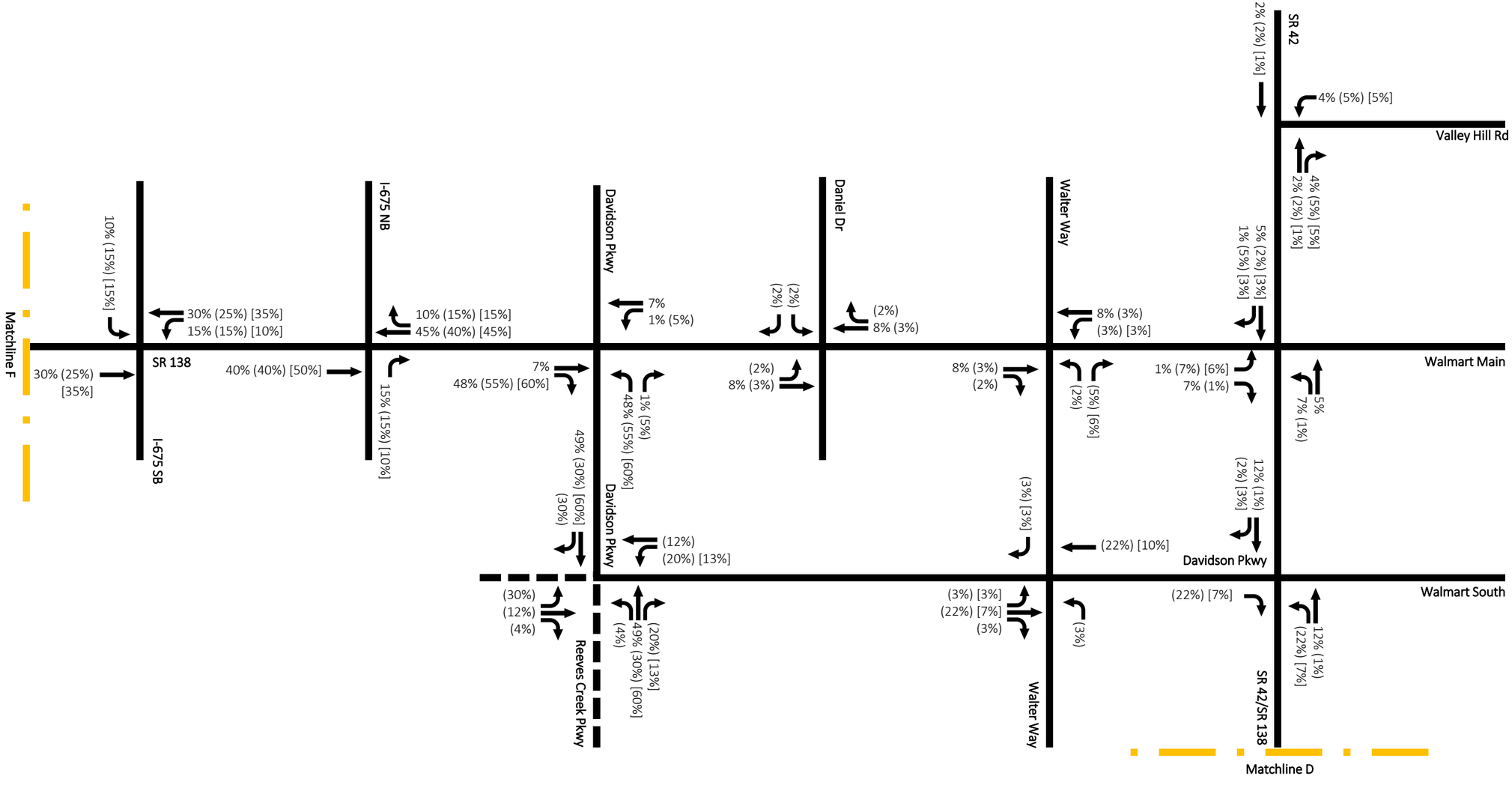
Reeves Creek DRI Trip Distribution – Figure 9B

LEGEND

(###) → Residential (Medical/Retail) [Convention/Office] % of Trip Distribution

Proposed Driveway

N



Reeves Creek DRI Trip Distribution – Figure 9C

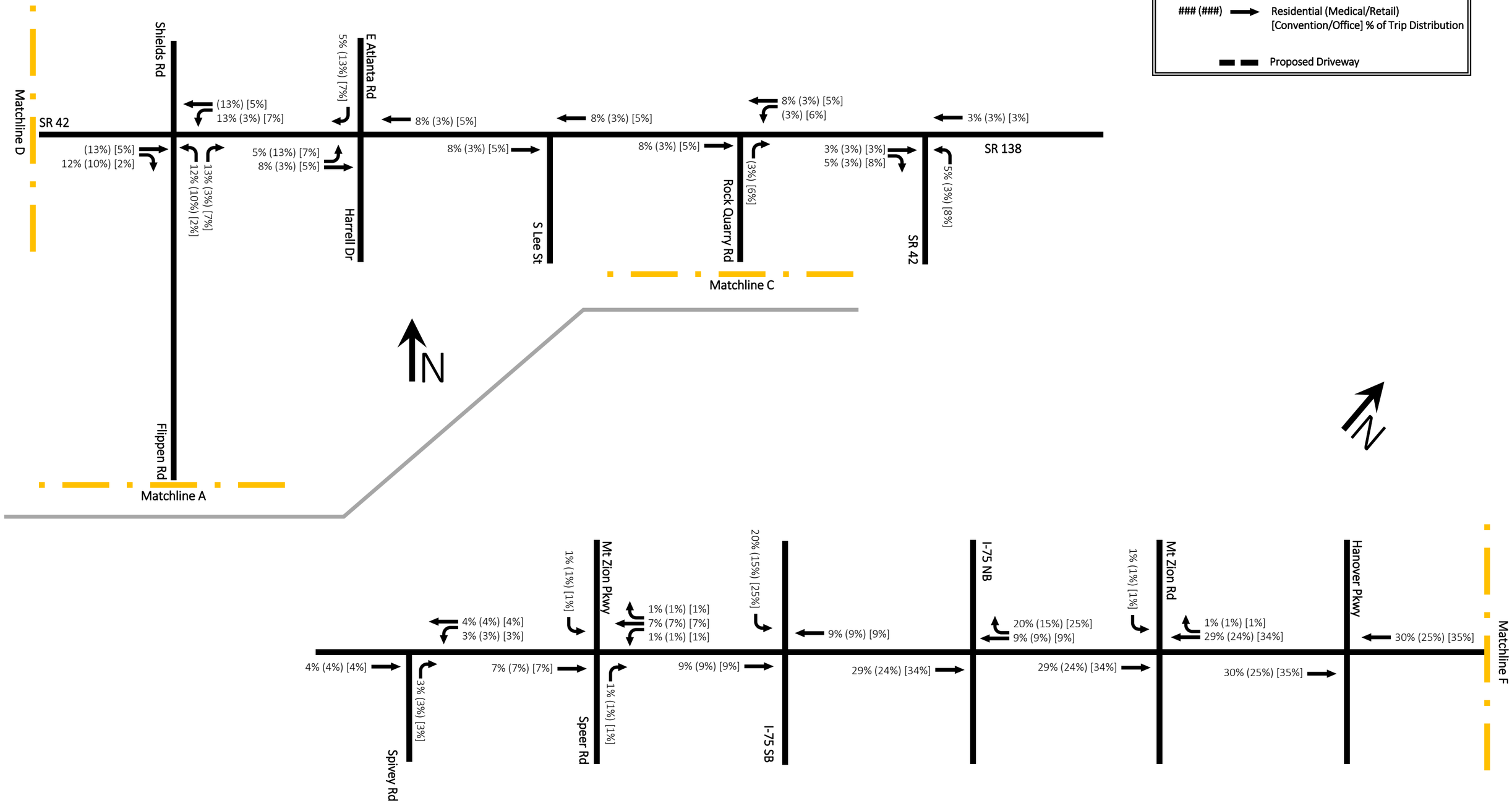
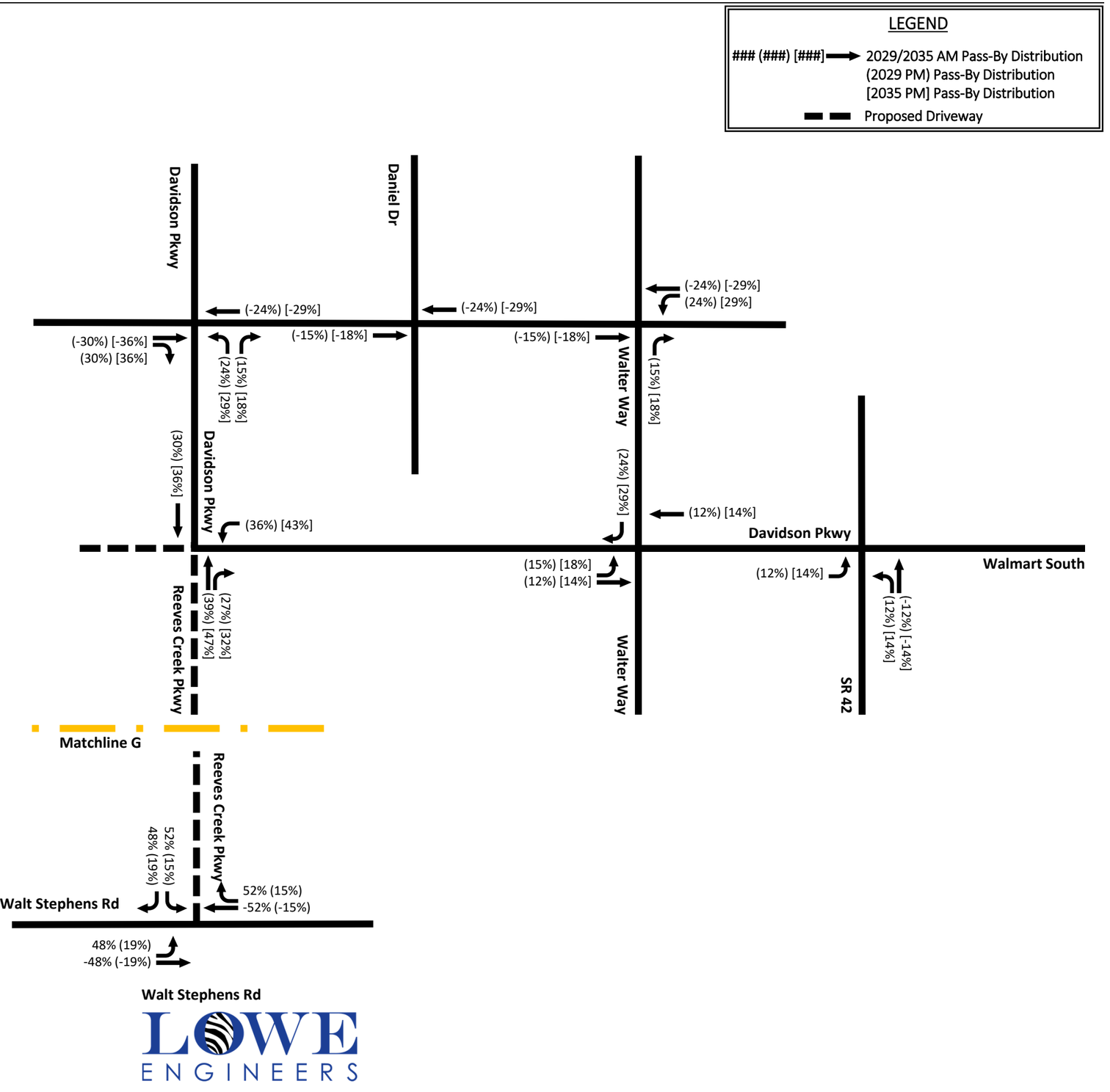
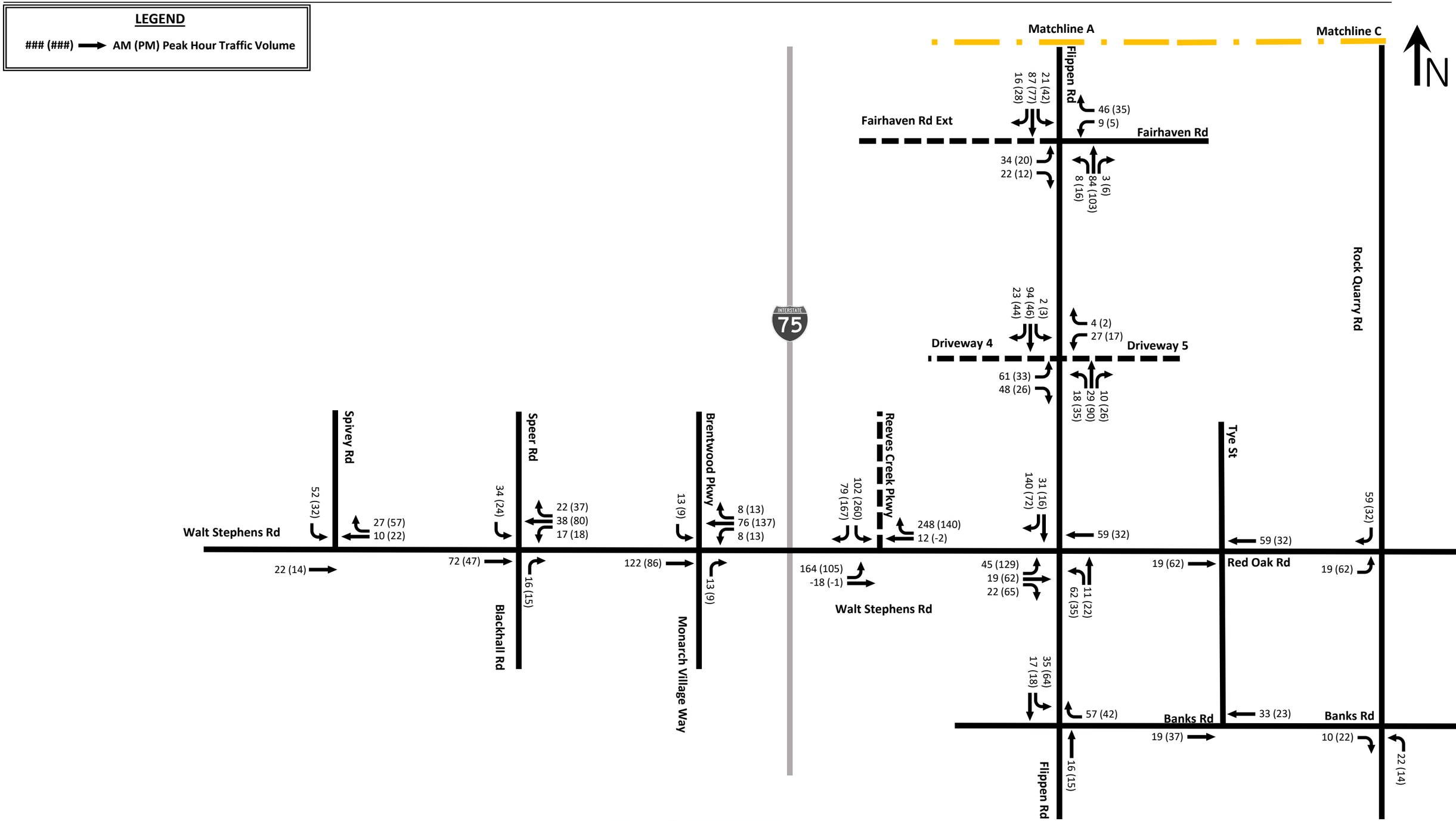


Figure 10: Pass-By Trip Distribution



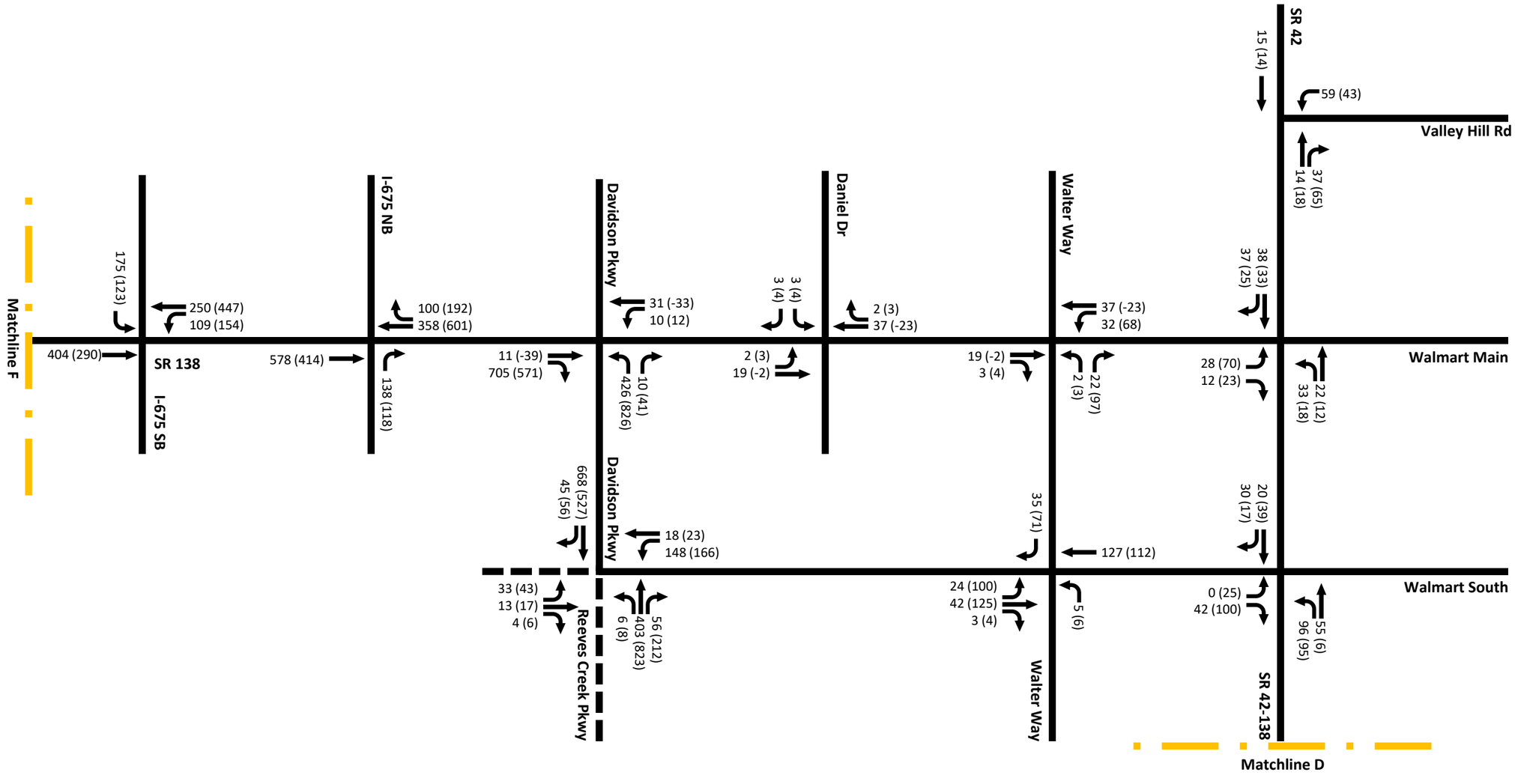
Reeves Creek DRI Phase 1 Project Trips (2029) – Figure 11A



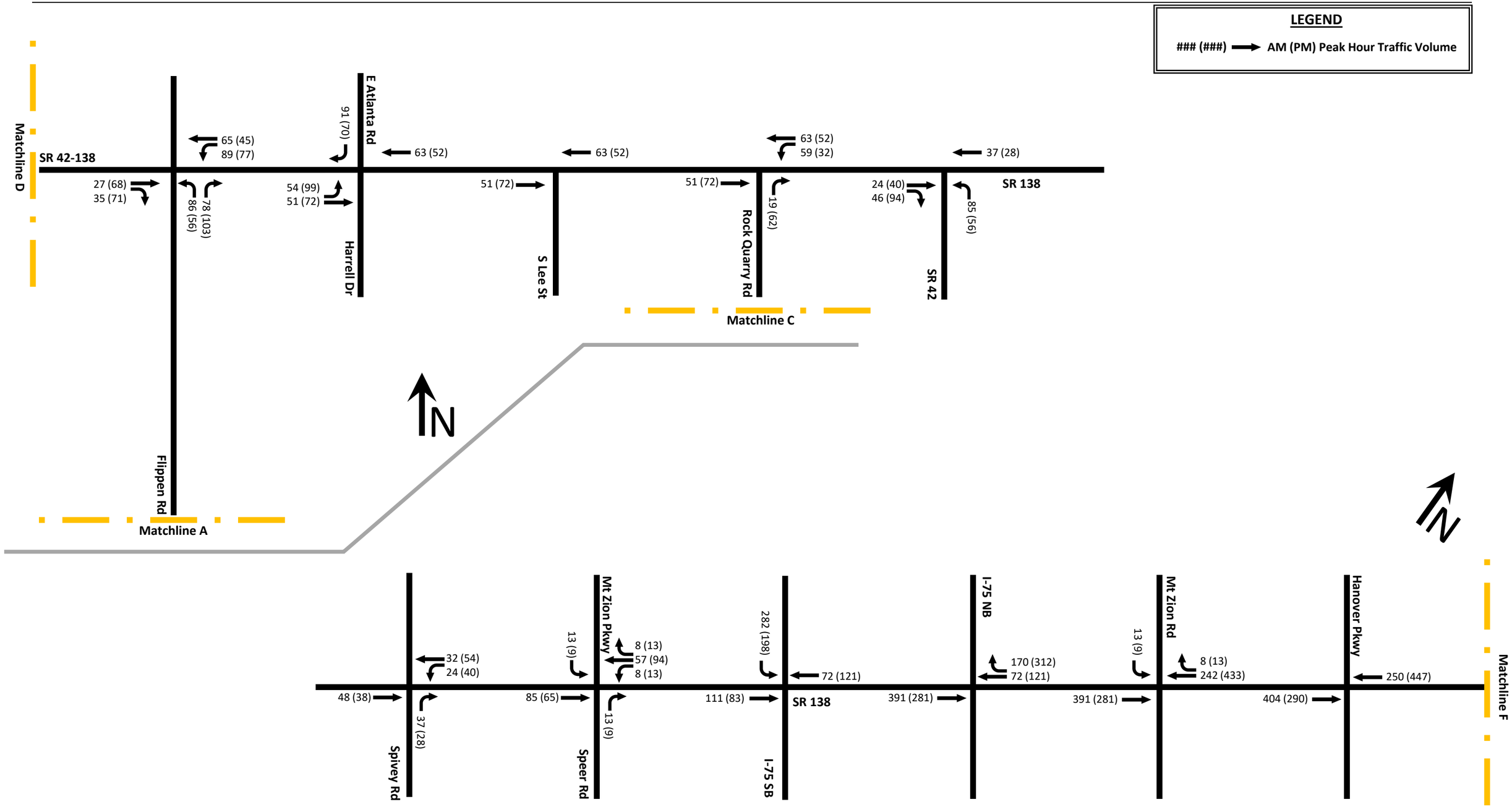
Reeves Creek DRI Phase 1 Project Trips (2029) – Figure 11B

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume



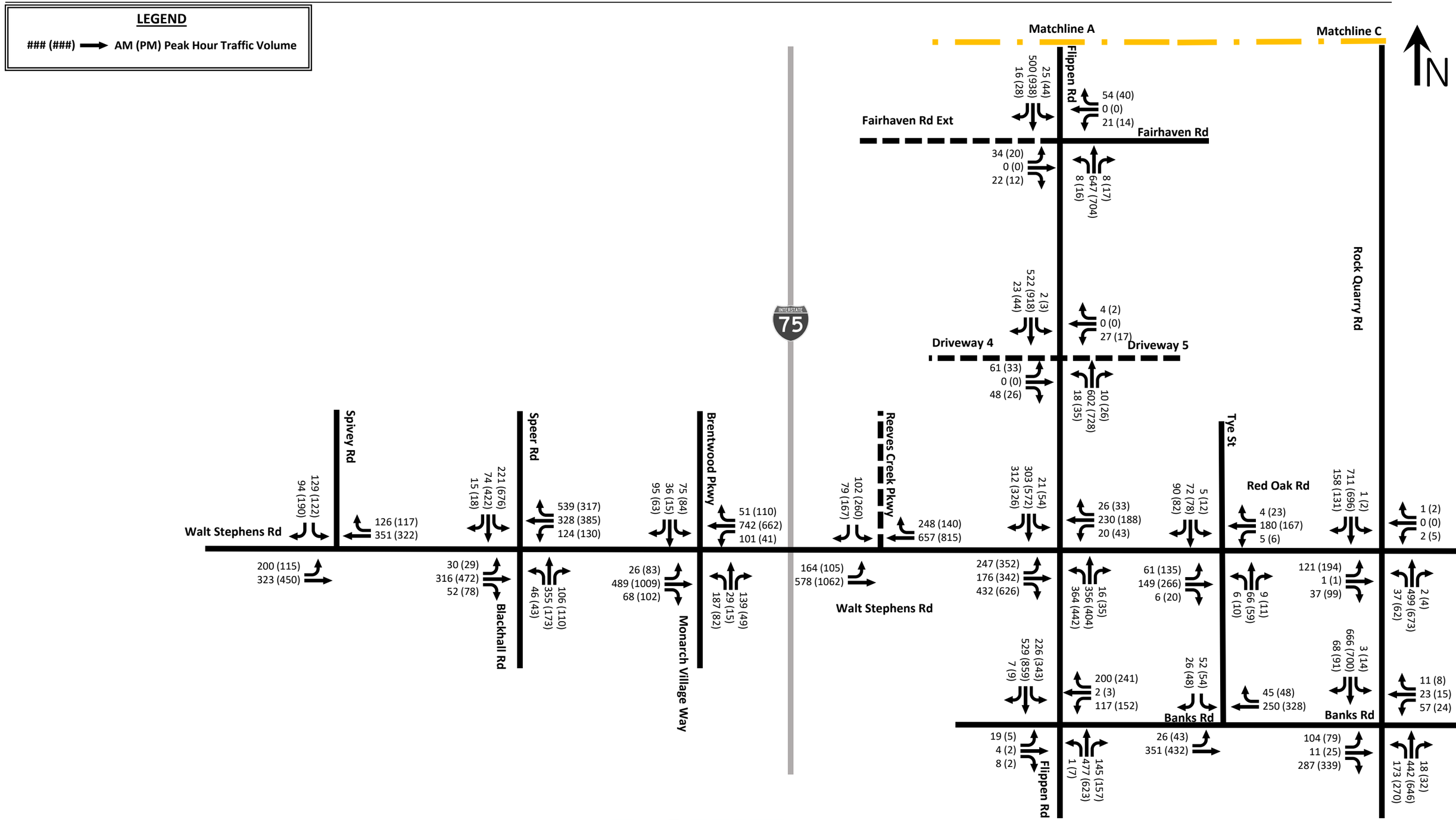
Reeves Creek DRI Phase 1 Project Trips (2029) – Figure 11C



Reeves Creek DRI Phase 1 Build Traffic Volumes (2029) – Figure 12A

LEGEND

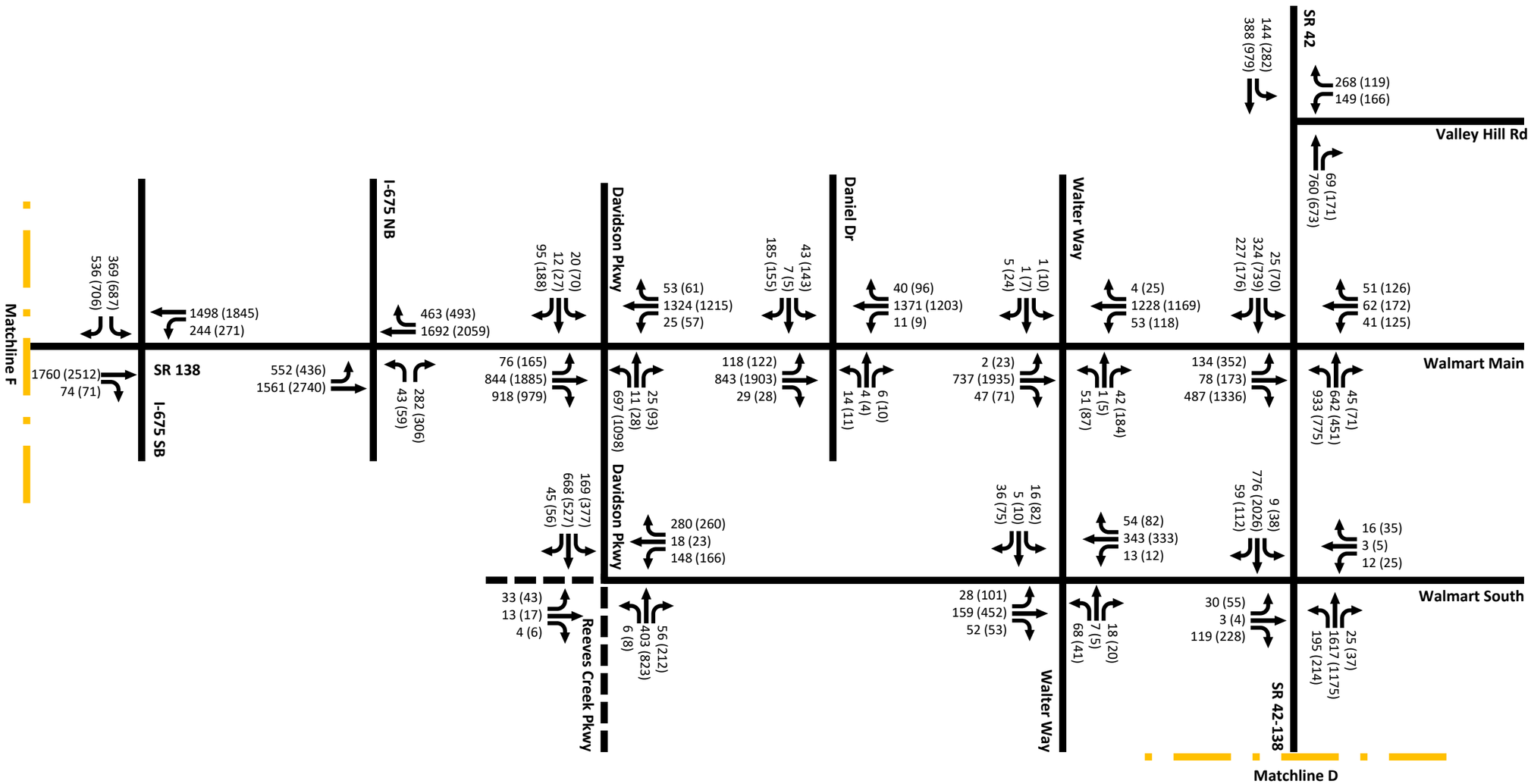
(###) → AM (PM) Peak Hour Traffic Volume



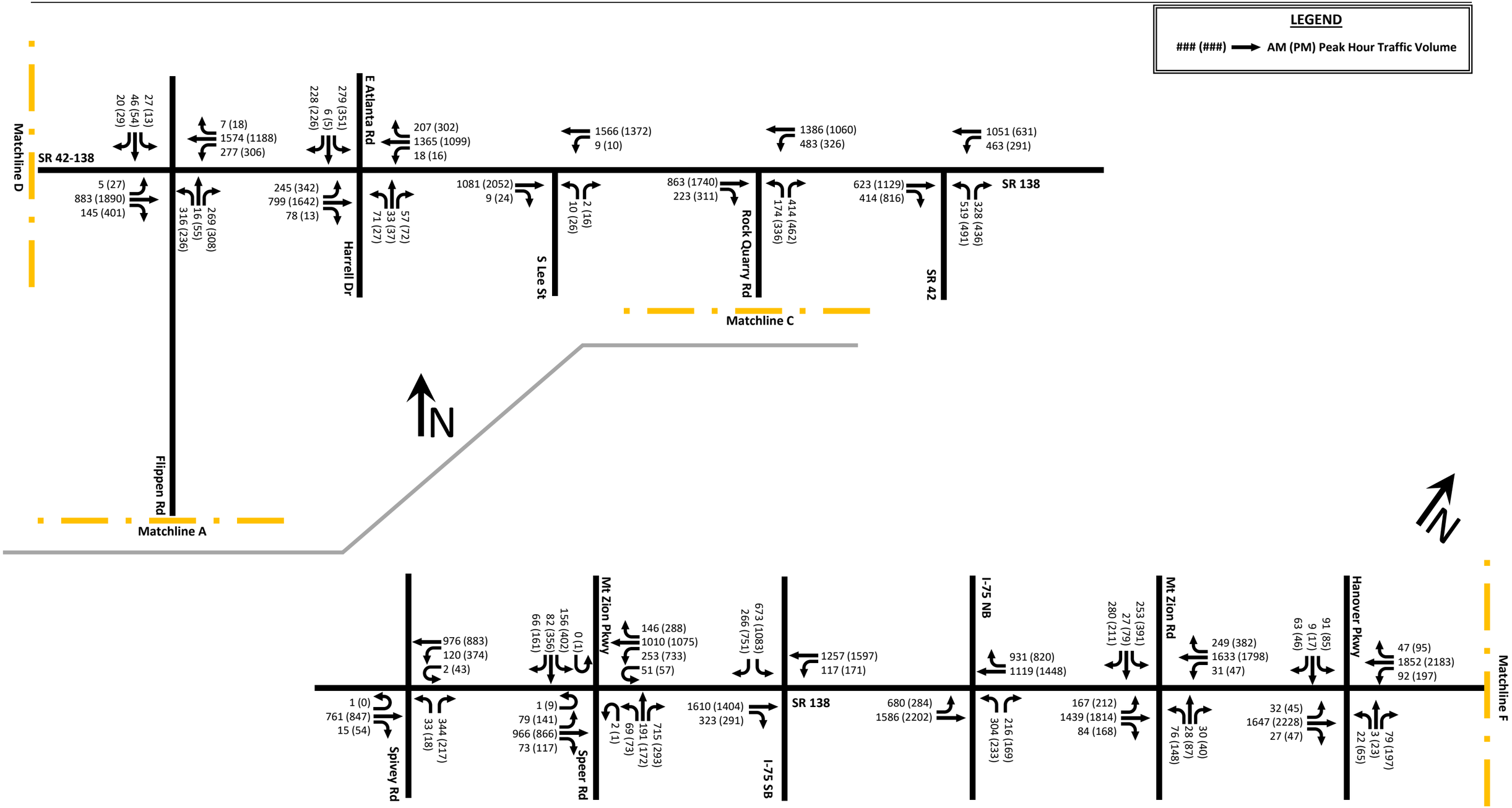
Reeves Creek DRI Phase 1 Build Traffic Volumes (2029) – Figure 12B

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume



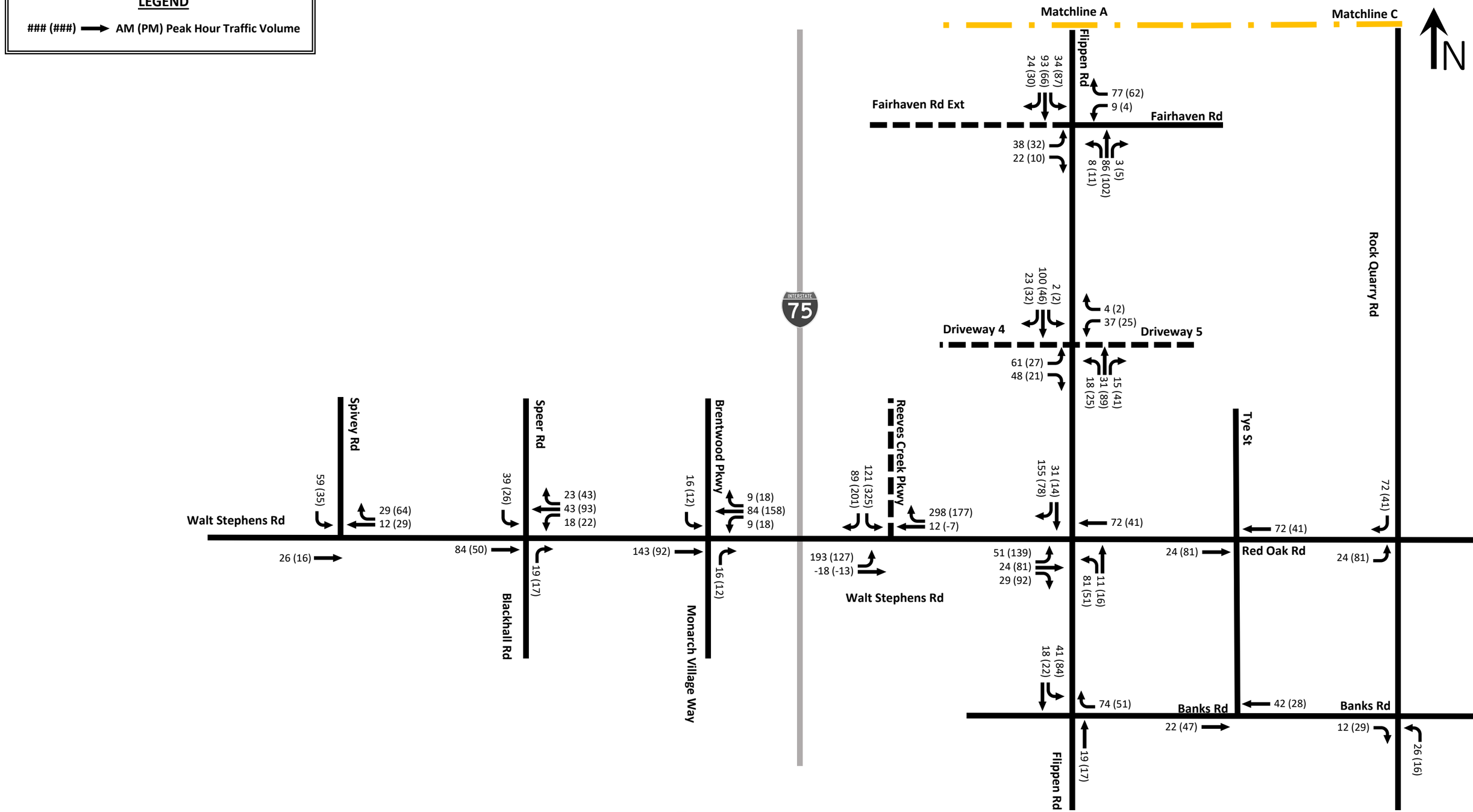
Reeves Creek DRI Phase 1 Build Traffic Volumes (2029) – Figure 12C



Reeves Creek DRI Phase 2 Project Trips (2035) – Figure 13A

LEGEND

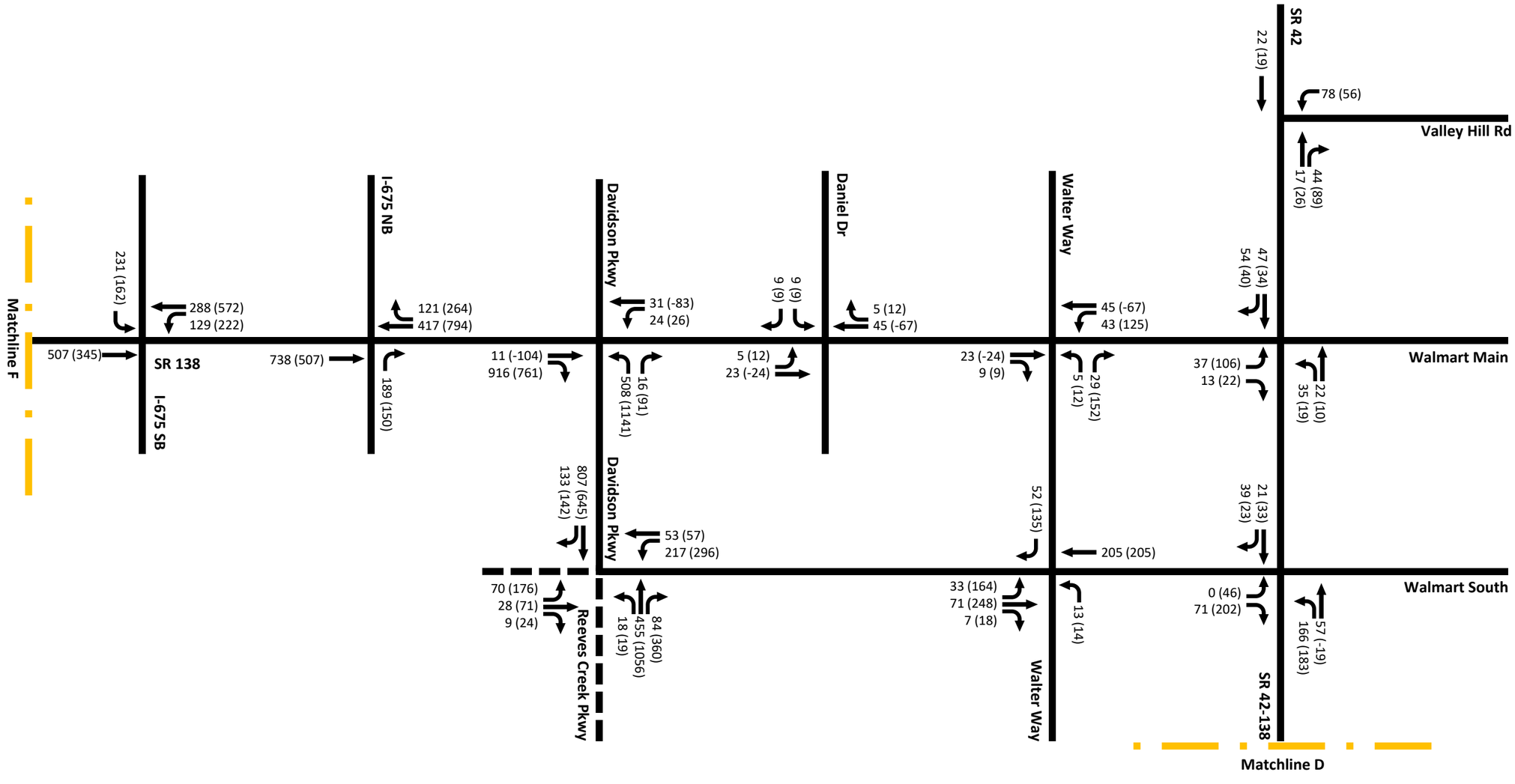
(###) → AM (PM) Peak Hour Traffic Volume



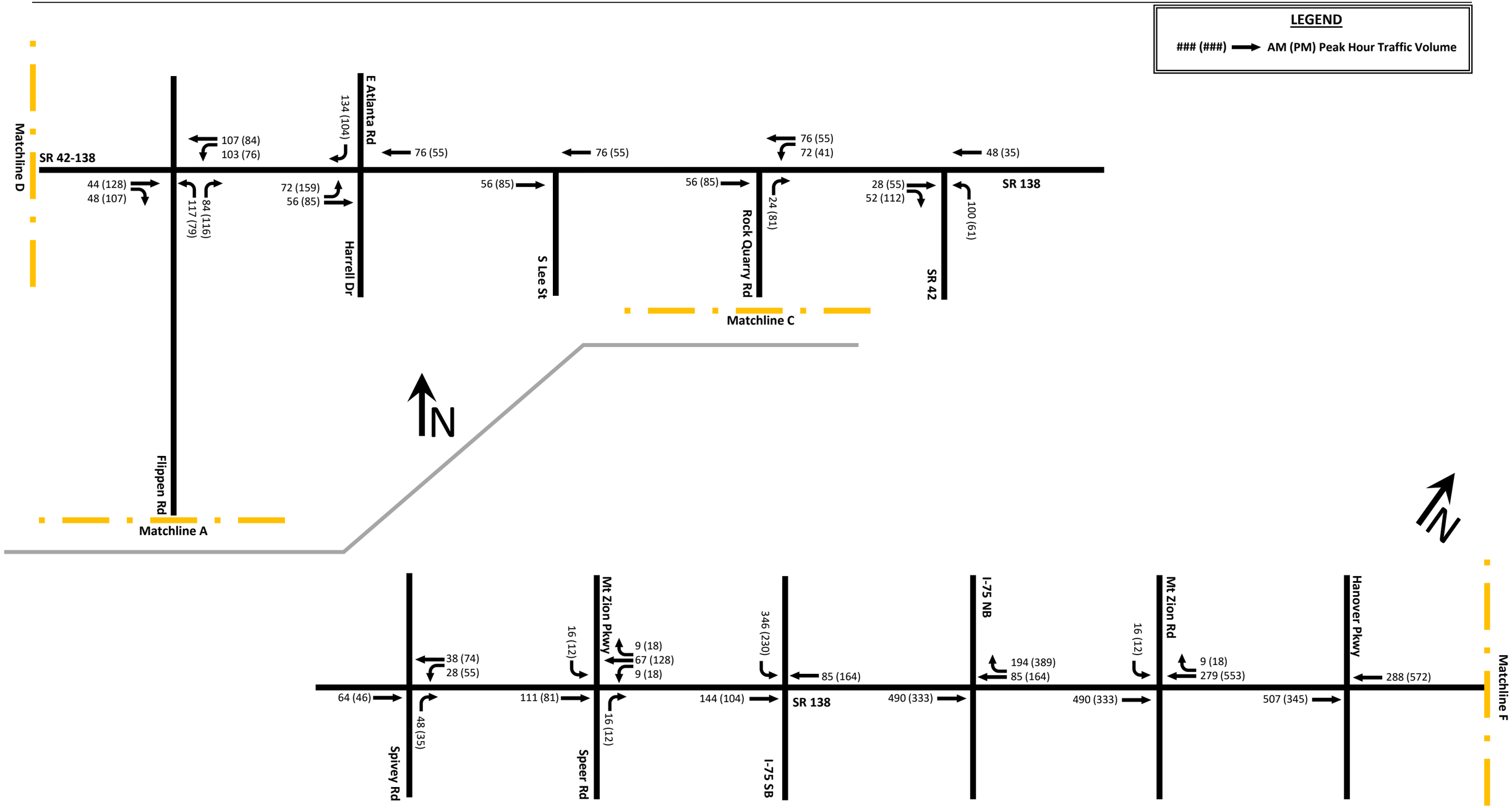
Reeves Creek DRI Phase 2 Project Trips (2035) – Figure 13B

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume



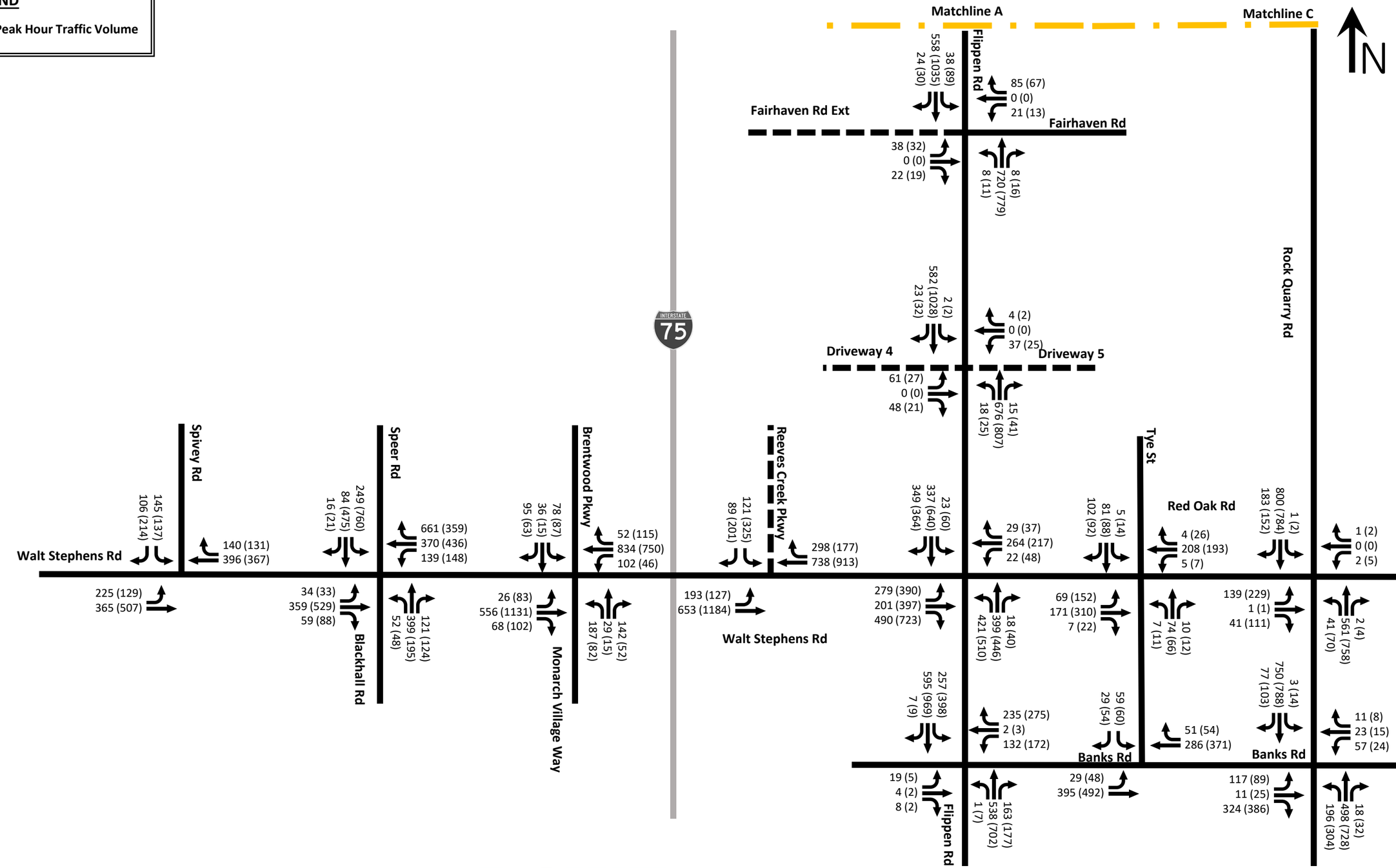
Reeves Creek DRI Phase 2 Project Trips (2035) – Figure 13C



Reeves Creek DRI Phase 2 Build Traffic Volumes (2035) – Figure 14A

LEGEND

(###) → AM (PM) Peak Hour Traffic Volume

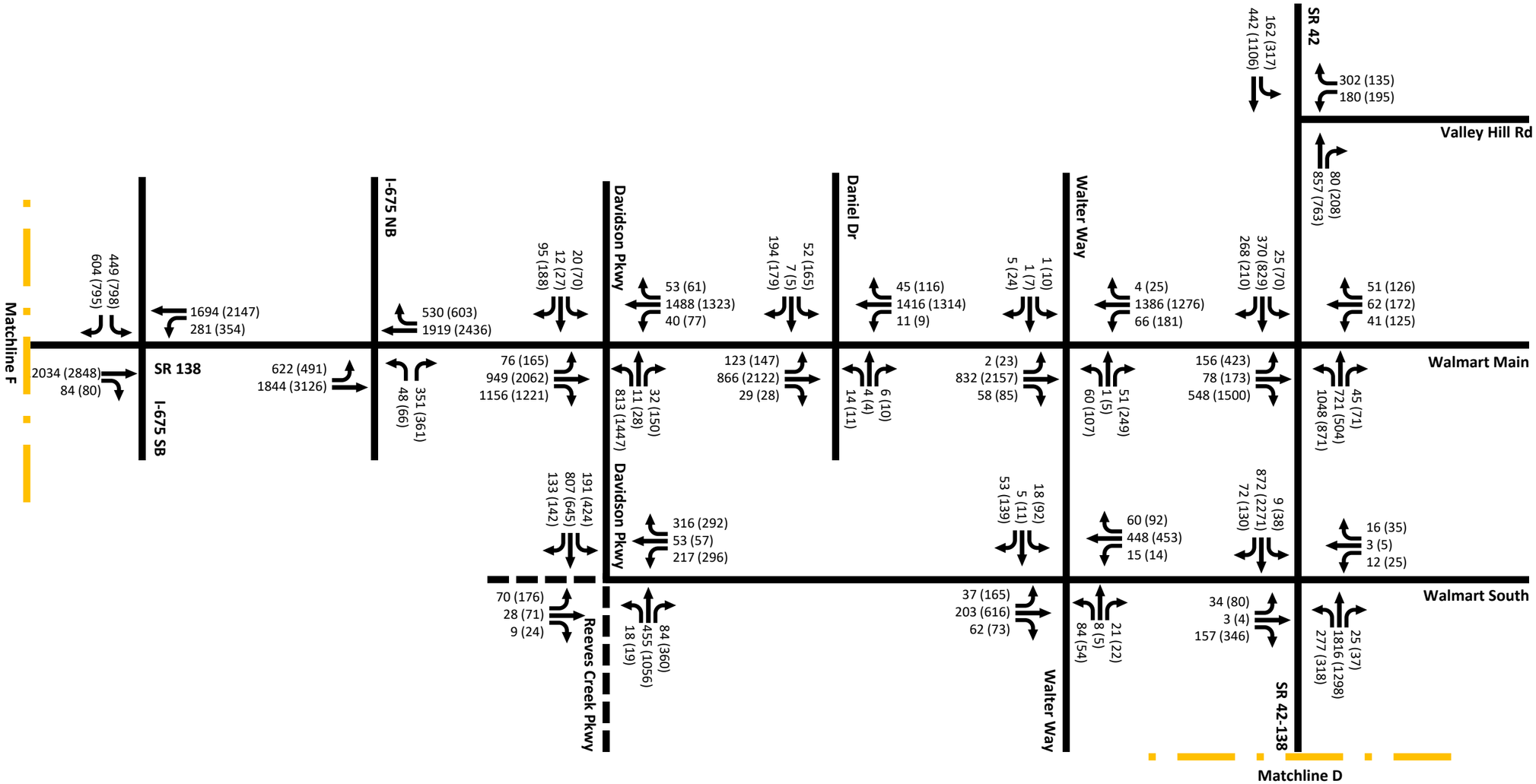


Reeves Creek DRI Phase 2 Build Traffic Volumes (2035) – Figure 14B

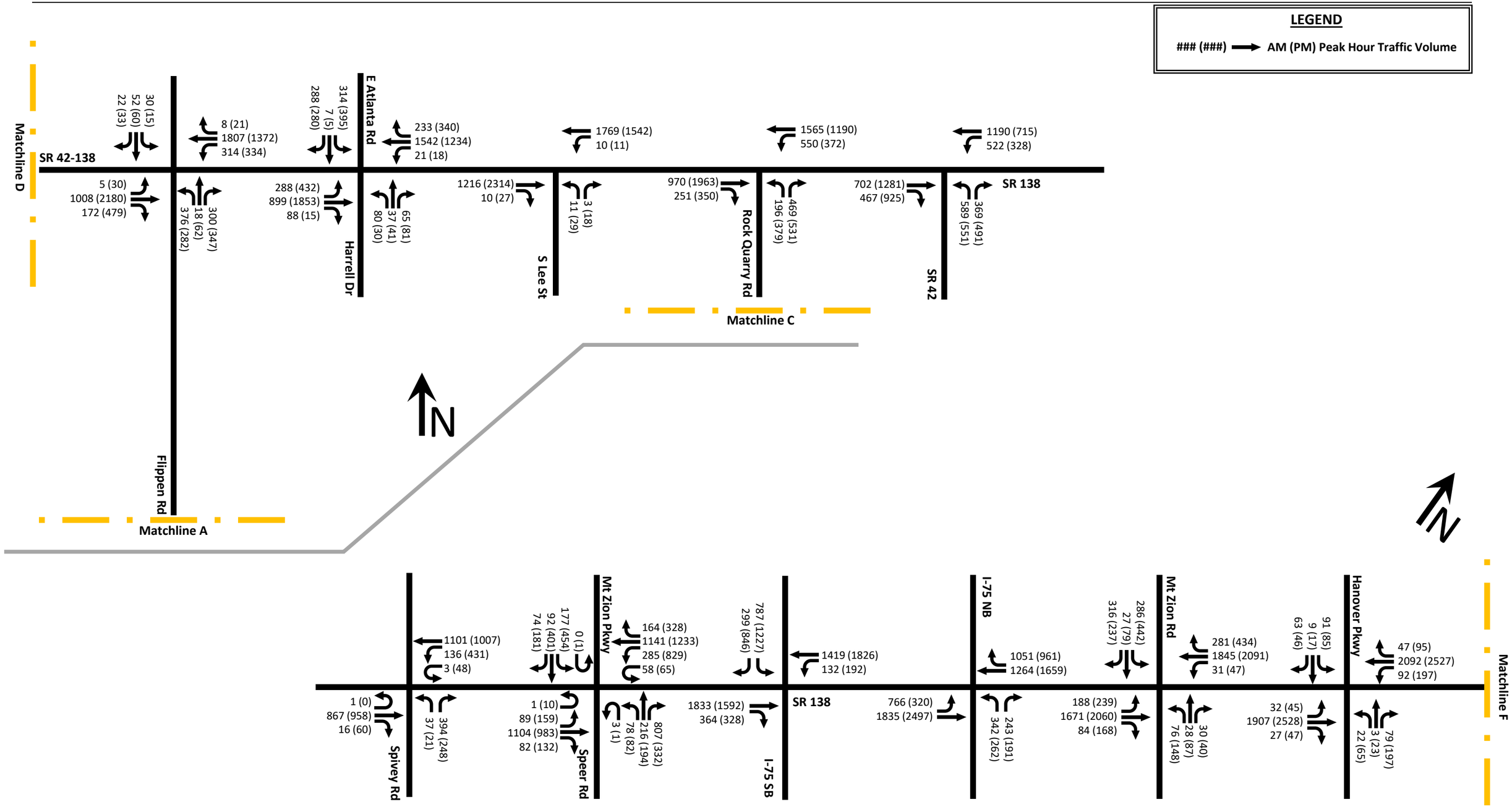
LEGEND

(###) → AM (PM) Peak Hour Traffic Volume

N



Reeves Creek DRI Phase 2 Build Traffic Volumes (2035) – Figure 14C



4.6 Build Phase 1 (2029)

4.6.1 Build Phase 1 (2029) Capacity Analysis

The Build Phase 1 (2029) traffic volumes were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The existing geometry and programmed improvements described in Section 3.2 were employed for the intersection capacity analysis. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition was used for analysis. Table 18 shows the Build Phase 1 (2029) Capacity Analysis. Synchro output files are included in APPENDIX D.

All traffic signal timings remain the same as in existing conditions. Traffic signal timings used in analysis are shown in APPENDIX D.

Table 18: Build Phase 1 (2029) Capacity Analysis

Intersection	Control	Lane Group Movement	Build Phase 1 - 2029			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	91.8	F	155.8	F
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	52.9	D	68.7	E
SR 42-138/US 23/N Henry Blvd @ S Lee St	Traffic Signal	Intersection	1.0	A	1.4	A
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	119.7	F	114.8	F
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	58.7	E	174.5	F
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T+R	901.1	F	281.0*	F
		WB L+T+R	1276.1	F	*	F
		NB L	11.4	B	96.6	F
		SB L	15.2	C	12.1	B
		Intersection	62.5	-	25.7*	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	43.9	D	110.4	F
SR 42/US 23/N Henry Blvd @ Valley Hill Rd	Traffic Signal	Intersection	12.3	B	11.6	B
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	Intersection	6.3	A	31.4	C
SR 138/Stockbridge Rd @ Daniel Dr	Traffic Signal	Intersection	9.3	A	11.2	B
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	100.6	F	541.1	F
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	112.3	F	134.9	F
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	68.6	E	151.7	F
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	5.3	A	11.9	B
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	28.3	C	70.1	E
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	63.2	E	9.3	A
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	28.1	C	82.0	F
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	100.4	F	56.4	E
SR 138/Lake Spivey Pkwy @ Spivey Rd	Traffic Signal	Intersection	23.6	C	15.7	B
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	12.1	B	8.8	A
		SB L+R	2576.9	F	117.6	F
		Intersection	471.8	-	28.7	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	63.7	E	38.8	D
Walt Stephens Rd @ Monarch Village Way/Brentwood Pkwy	Traffic Signal	Intersection	37.9	D	23.9	C
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	55.5	E	157.5	F
Flippen Rd @ Banks Rd/Village Way	Traffic Signal	Intersection	20.9	C	16.1	B
Banks Rd @ Tye St	Side Street Stop Control	EB L	8.0	A	8.2	A
		SB L+R	15.9	C	18.1	C
		Intersection	2.0	-	2.3	-
Rock Quarry Rd @ Banks Rd/Carrington Ridge	Traffic Signal	Intersection	26.3	C	22.3	C
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	EB R	11.4	B	11.8	B
		WB R	9.9	A	10.6	B
		NB L	10.4	B	10.1	B
		SB L	8.5	A	9.0	A
		Intersection	1.4	-	2.2	-
Red Oak Rd @ Tye St	All-Way Stop Control	EB L+T+R	11.6	B	17.6	C
		WB L+T+R	10.9	B	10.9	B
		NB L+T+R	9.6	A	10.1	B
		SB L+T+R	10.3	B	11.0	B
		Intersection	**10.8**	**B**	**14.1**	**B**
Davidson Pkwy @ Walter Way	All-Way Stop Control	EB L	9.0	A	11.2	A
		EB T+R	10.8	B	50.8	F
		WB L	8.7	A	9.9	A
		WB T+R	16.1	C	30.1	D
		NB L+T+R	10.0	A	11.9	B
		SB L+T+R	9.3	A	13.8	B
		Intersection	**13.2**	**B**	**33.7**	**D**
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	EB L+T+R	45.0	E	145.6	F
		WB L+T+R	27.4	D	60.2	F
		NB L	8.6	A	10.6	B
		SB L	9.3	A	9.6	A
		Intersection	3.6	-	4.6	-
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	23.2	C	71.8	E
Walt Stephens Rd @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	11.2	B	23.8	C
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control	EB L+T+R	47.3	E	160.5	F
		WB L+T+R	43,2	E	137.5	F
		NB L	8.7	A	10.8	B
		SB L	8.9	A	9.5	A
		Intersection	5.0	-	6.8	-

*actual value too high to calculate

The following intersections are expected to experience inadequate LOS in Build Phase 1 (2029) Conditions during one or both peak hours:

SR 138 at SR 42/US 23/N Henry Blvd

- The intersection is expected to operate at LOS F during both peak hours.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd

- The intersection is expected to operate at LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- The intersection is expected to operate at LOS F during both peak hours.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- The intersection is expected to operate at LOS E during the AM peak hour and at LOS F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Eastbound and westbound left turn movements are expected to remain LOS F during both peak hours.
- The eastbound right turn movement and the northbound left turn movement also are expected to experience LOS F during the PM peak hour.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- The intersection is expected to operate at LOS F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy

- The intersection is expected to operate at LOS F during both peak hours.

SR 138/Lake Spivey Pkwy at I-675 NB

- The intersection is expected to operate at LOS F during both peak hours.

SR 138/Lake Spivey Pkwy at I-675 SB

- The intersection is expected to operate at LOS E during the AM peak hour and at LOS F during the PM peak hour.

SR 138/Lake Spivey Pkwy at Mt Zion Rd

- The intersection is expected to operate at LOS E during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB

- The intersection is expected to operate at LOS E during the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB

- The intersection is expected to operate at LOS F during the PM peak hour.

Walt Stephens Rd at Spivey Rd

- Southbound left turn movement and overall approach are expected to operate at LOS F during both peak hours.
- Delay in the AM peak hour is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

Walt Stephens Rd at Speer Rd/Blackhall Rd

- The intersection is expected to operate at LOS E during the AM peak hour.

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- The intersection is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

Flippen Rd at Fairhaven Rd

- Eastbound single-lane shared approach is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.
- Westbound single-lane shared approach is expected to operate at LOS F during the PM peak hour.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

Davidson Pkwy at proposed Reeves Creek Pkwy

- The intersection LOS is expected to operate at LOS E during the PM peak hour.

Flippen Rd at Site Driveways 4 and 5

- Eastbound single-lane shared approach is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.
- Westbound single-lane shared approach is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

4.6.2 Build Phase 1 (2029) Capacity Analysis Required Improvements

Improvements were identified for intersections with inadequate LOS in Build Phase 1 (2029) Conditions. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing. The results of the Build Phase 1 (2029) Conditions Required Improvements capacity analysis is shown in Table 19.

All traffic signal timings remain the same as in Background 2029 Conditions, except for the following intersections:

- SR 42-138/US 23/North Henry Boulevard at SR 138/Stockbridge Road and Walmart driveway
  - Changed side street phasing from split phasing to leading protected+permissive left turns
- SR 138/Stockbridge Road at Davidson Parkway
  - Changed phasing from split phasing on side streets to one protected only northbound left turn and one protected+permissive southbound left turn phase on side streets due to proposed geometry change on northbound approach from a single northbound left turn lane to a quadruple left turn lane.
- Any intersection proposed to go from a single lane left turn to two or more left turn lanes received protected only left turn phasing for that approach.

The following improvements are needed for Build Phase 1 (2029) Conditions:

SR 138 at SR 42/US 23/N Henry Blvd
- Add 1 WBL lane, 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd
- Add 1 NBR lane

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr
- Add 1 EBL lane, 1 WBR lane, 2 SBL lanes, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd
- Add 1 EBR lane, 1 NBL lane

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy
- Add 1 EBR lane, 1 WBR lane, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy
- No geometric changes, just phasing changes

SR 138/Stockbridge Rd at Davidson Pkwy
- Add 4 NBL lanes, 1 NBR lane, 1 SBL lane, 2 EBT lanes, 2 WBT lanes

SR 138/Lake Spivey Pkwy at I-675 NB
- Add 1 NBR lane, 1 EBL lane, 1 EBT lane

SR 138/Lake Spivey Pkwy at I-675 SB
- Add 1 EBT lane, 1 EBR lane

SR 138/Lake Spivey Pkwy at Mt Zion Rd
- Add 1 SBL lane

SR 138/Lake Spivey Pkwy at I-75 NB
- Add 1 NBL lane

SR 138/Lake Spivey Pkwy at I-75 SB
- Add 1 SBR lane

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy
- Add 1 NBR lane

Walt Stephens Rd at Spivey Rd
- Add 1 EBL lane, 1 WBR lane, 1 SBR lane

Walt Stephens Rd at Speer Rd/Blackhall Rd
- Add 1 WBR lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd
- Make EBR free flow right turn lane (add lane on Flippen Rd south of intersection), add 1 NBL lane

Flippen Rd at Fairhaven Rd
- Add 1 EBR lane, 1 WBR lane

Davidson Pkwy at proposed Reeves Creek Pkwy
- Add 1 SBL lane

Flippen Rd at Site Driveways 4 and 5
- Add 1 EBR lane, 1 WBR lane

Table 19: Build Phase 1 (2029) Capacity Analysis with Improvements

Intersection	Control	Lane Group Movement	Build Phase 1 - 2029 Improved			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	34.0	C	79.6	E
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	35.6	D	43.1	D
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	54.0	D	29.1	C
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	29.8	C	78.5	E
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T	1122.2	F	*	F
		EB R	12.7	B	126.7	F
		EB Approach	**253.6**	F	*	F
		WB L+T	1577.6	F	*	F
		WB R	17.6	C	14.0	B
		WB Approach	**772.4**	F	*	F
		NB L	11.4	B	96.6	F
		SB L	15.2	C	12.1	B
		Intersection	22.6	-	5.3*	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	37.2	D	70.8	E
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	15.3	B	50.4	D
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	51.4	D	52.3	D
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	17.6	B	38.8	D
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	28.7	C	48.2	D
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	43.6	D	31.2	C
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	25.3	C	36.9	D
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	45.1	D	43.1	D
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	12.1	B	8.8	A
		SB L	1433.8	F	52.5	F
		SB R	15.0	C	12.6	B
		SB Approach	**835.7**	F	**28.2**	D
		Intersection	154.3	-	7.5	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	22.4	C	37.6	D
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	47.6	D	61.5	E
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	EB L+T	59.7	F	189.8	F
		EB R	12.1	B	18.4	C
		EB Approach	**41.0**	E	**125.5**	F
		WB L+T	44.1	E	138.9	F
		WB R	14.8	B	15.3	C
		WB Approach	**23.0**	C	**47.3**	E
		NB L	8.6	A	10.6	B
		SB L	9.3	A	9.6	A
		Intersection	3.2	-	3.9	-
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	29.3	C	50.2	D
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control	EB L+T	55.9	F	196.0	F
		EB R	12.7	B	18.8	C
		EB Approach	**36.9**	E	**117.9**	F
		WB L+T	46.5	E	147.7	F
		WB R	12.9	B	14.4	B
		WB Approach	**42.2**	E	**133.7**	F
		NB L	8.7	A	10.8	B
		SB L	8.9	A	9.5	A
		Intersection	4.1	-	5.4	-

*actual value too high to calculate

SR 138 at SR 42/US 23/N Henry Blvd
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to C in the AM peak hour and from F to E in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from F to C in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to C in the AM peak hour and from F to E in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy
While the approach delays are reduced significantly, the addition of right turn lanes on both the eastbound and westbound approaches do not improve the LOS beyond F on either approach during either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to E in the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to B in the AM peak hour and from F to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 NB
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from F to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 SB
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to B in the AM peak hour and from F to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at Mt Zion Rd
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to D in the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from E to D in the PM peak hour.

Walt Stephens Rd at Spivey Rd
While the approach delay is reduced significantly, the addition of a right turn lane on the southbound approach does not improve the approach LOS beyond F in the AM peak hour; however, in the PM peak hour, the southbound left turn movement LOS is F, but the overall southbound approach LOS is D. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Walt Stephens Rd at Speer Rd/Blackhall Rd
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to C in the AM peak hour.

Flippen Rd at Walt Stephens Rd/Red Oak Rd
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to D in the AM peak hour and from F to E in the PM peak hour.

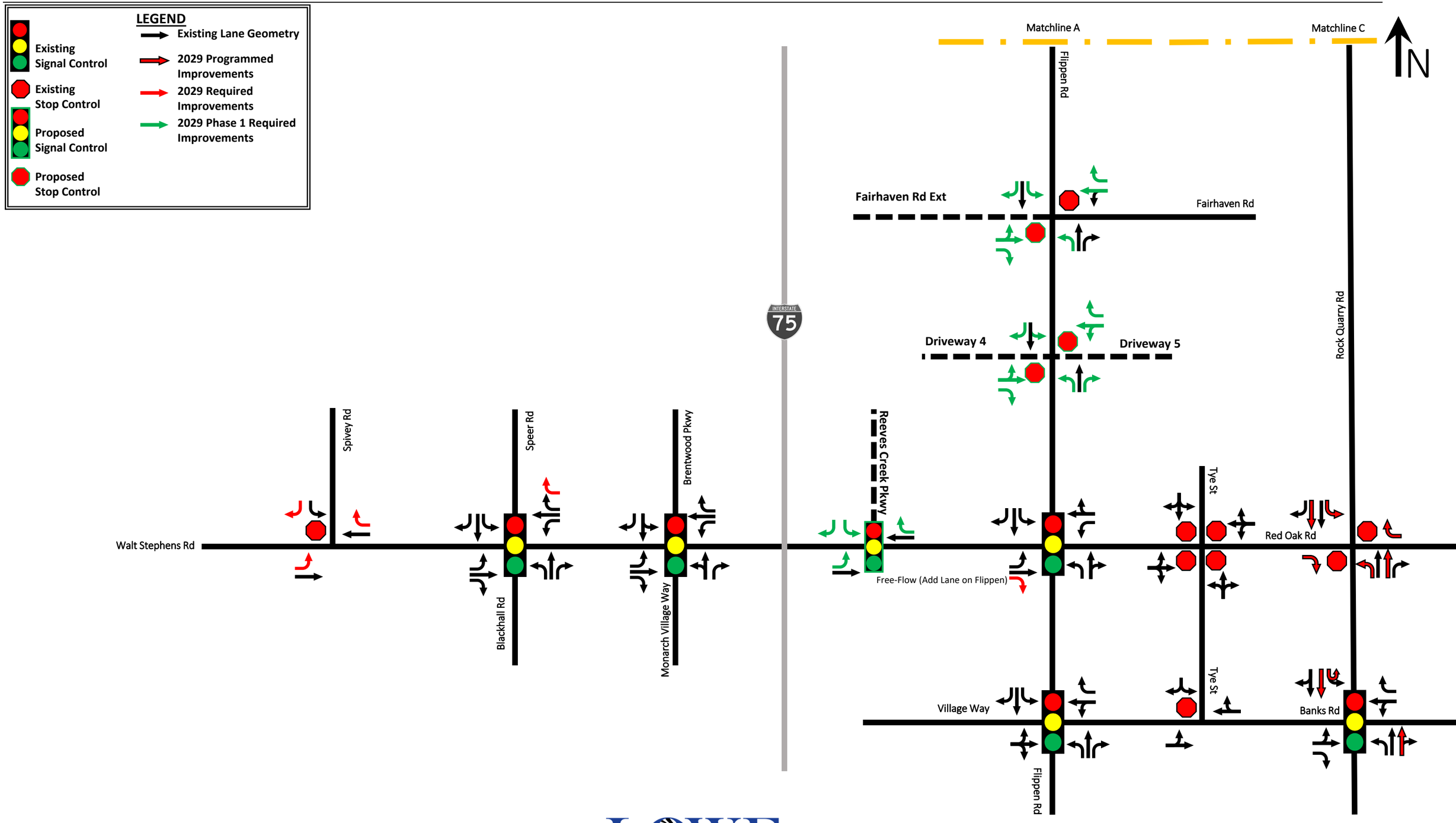
Flippen Rd at Fairhaven Rd
The required Build Phase 1 (2029) conditions improvements described above help to reduce the delays of both the eastbound and westbound approaches; however, only the westbound approach sees a significant change in LOS, improving from F to E. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Davidson Pkwy at proposed Reeves Creek Pkwy
The required Build Phase 1 (2029) conditions improvements described above help to improve the LOS from E to D in the PM peak hour.

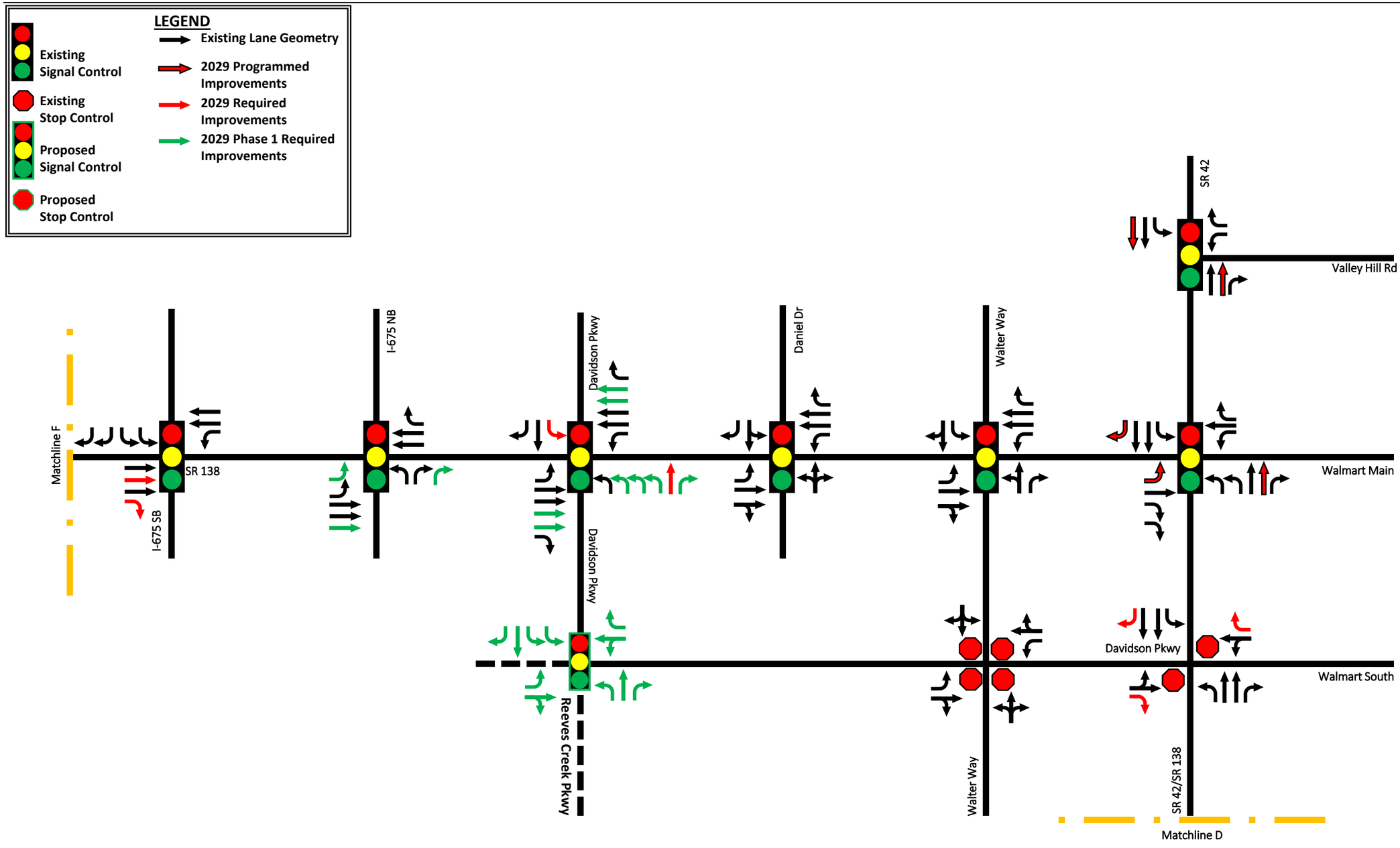
Flippen Rd at Site Driveways 4 and 5
The required Build Phase 1 (2029) conditions improvements described above help to reduce the delays of both the eastbound and westbound approaches; however, not beyond LOS E for either approach in either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

The proposed Build Phase 1 (2029) Lane Geometry is shown in Figure 15.

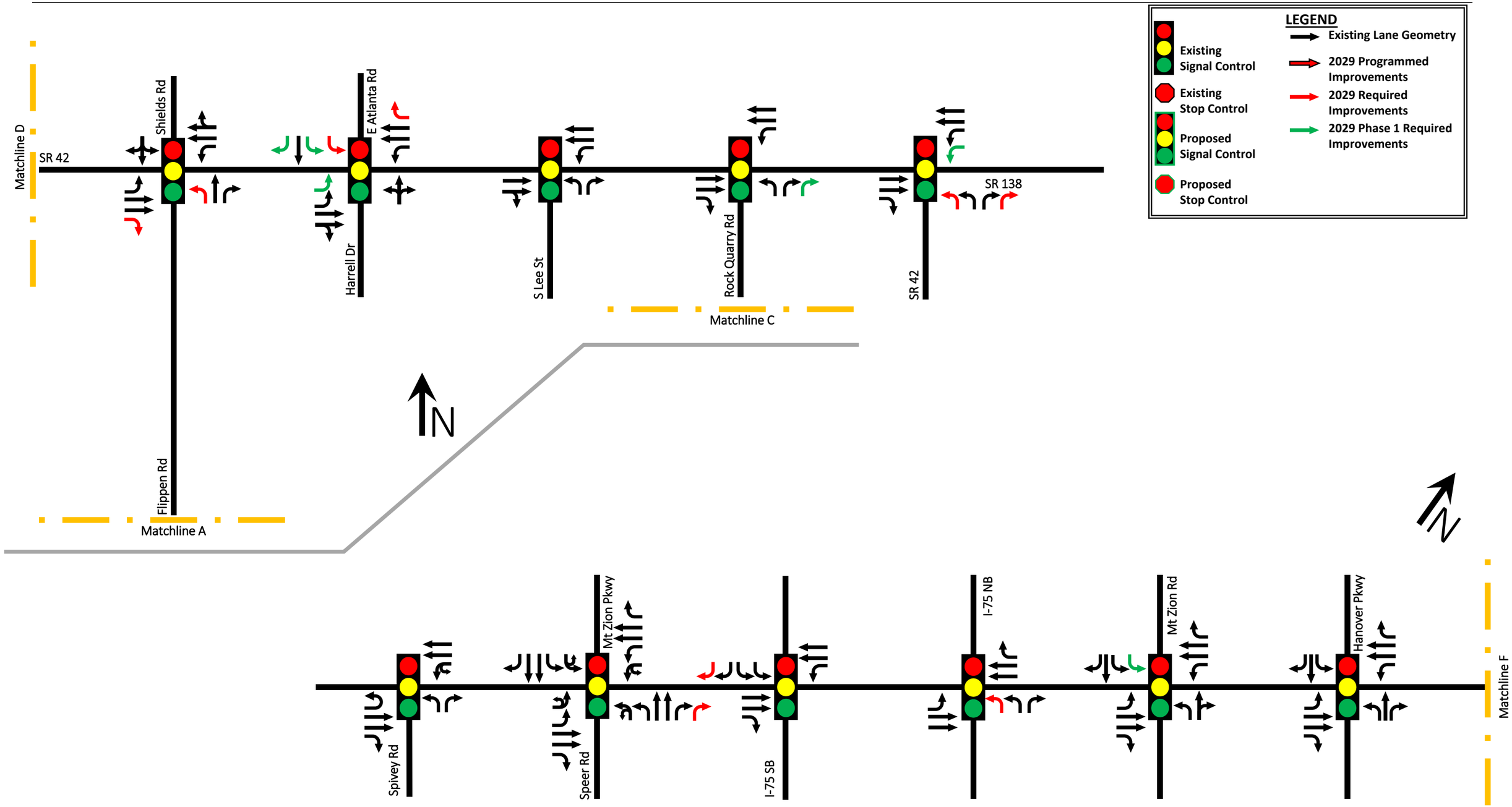
Reeves Creek DRI Build Phase 1 2029 Lane Geometry – Figure 15A



Reeves Creek DRI Build Phase 1 2029 Lane Geometry – Figure 15B



Reeves Creek DRI Build Phase 1 2029 Lane Geometry – Figure 15C



4.6.3 Build Phase 1 (2029) Segment Analysis

A segment capacity analysis was performed for all study roadway segments using HCS 7 software and HCM 6th Edition methodology. The existing geometry and programmed improvements described in Section 3.2 were employed for the segment analysis. The results of the segment analysis are summarized in Table 20. HCS 7 output files are included in APPENDIX D**.**

Table 20: Build Phase 1 (2029) Segment Analysis

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	D	D	D	**E**
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	D	C	D	**E**
3	Banks Rd	Flippen Rd	Rock Quarry Rd	C	C	C	C
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd	A	B	A	A
5	SR 42/US 23/ N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd	B	A	B	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	B	D	**E**	C
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	C	D	D	C
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	C	D	**E**	D
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	C	C	D	C
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	B	D	D	C
11	SR 138/Stockbridge Rd	Walter Way	SR 42/US 23/N Henry Blvd	B	C	D	C
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	B	C	D	C
13	SR 138/Stockbridge Rd	Davidson Pkwy	Daniel Dr	B	C	D	C
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	D	D	**F**	**E**
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	D	D	**F**	D
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	C	D	D	D
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	C	D	D	D
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	D	D	D	**E**
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	D	C	**E**	D
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	D	C	C	D
21	SR 138/Lake Spivey Pkwy	Spivey Rd	Speer Rd/Mt Zion Pkwy	B	B	B	C
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	**E**	**E**	**E**	**E**
22B	Davidson Pkwy	*proposed* Reeves Creek Pkwy	SR 42-138/US 23/N Henry Blvd	B	C	D	C
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	**E**	B	C	**E**
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	C	B	B	B
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd	B	A	C	B
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	**E**	**E**	**E**	**E**
26B	Walt Stephens Rd	*proposed* Reeves Creek Pkwy	Brentwood Pkwy/Monarch Village Way	D	**E**	**E**	D
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	C	**E**	**E**	D
28	Walt Stephens Rd	Spivey Rd	Speer Rd/Blackhall Rd	C	D	C	C

The following segments are expected to experience inadequate LOS in Build Phase 1 (2029) Conditions during one or both peak hours:

Flippen Rd from Banks Rd to Walt Stephens Rd/Red Oak Rd

- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour in the southbound direction.

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from Harrel Dr/E Atlanta Rd to S Lee St

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The segment is expected to operate at LOS F during the PM peak hour in the eastbound direction and at LOS E during the PM peak hour in the westbound direction.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The segment is expected to operate at LOS F during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd

- The segment is expected to operate at LOS E during the PM peak hour in the westbound direction.

SR 138/Lake Spivey Pkwy from I-75 SB to I-75 NB

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The segment is expected to operate at LOS E during both peak hours in both directions.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The segment is expected to operate at LOS E during the AM peak hour in the northbound direction and at LOS E during the PM peak hour in the southbound direction.

Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy

- The segment is expected to operate at LOS E in the westbound direction during both peak hours.

Walt Stephens Rd from proposed Reeves Creek Pkwy to Brentwood Pkwy/Monarch Village Way

- The segment is expected to operate at LOS E in the westbound direction during the AM peak hour and at LOS E in the eastbound direction during the PM peak hour.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The segment is expected to operate at LOS E in the westbound direction during the AM peak hour and at LOS E in the eastbound direction during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour in the eastbound direction.

4.6.4 Build Phase 1 (2029) Segment Analysis Required Improvements

At roadway segments that are expected to experience inadequate LOS in Build Phase 1 (2029) conditions, one lane was added to mitigate the inadequate LOS. The results of the Build Phase 1 (2029) Segment Analysis with Improvements are shown below in Table 21.

Table 21: Build Phase 1 (2029) Segment Analysis with Improvements

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	-	A	-	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	A	-	C	-
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	B	-	C	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	C	C	D	C
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	C	-	D	-
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	-	C	-	C
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	C	-	C	-
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	A	B	B	B
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	B	A	A	B
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	B	B	B	B
26B	Walt Stephens Rd	*proposed* Reeves Creek Pkwy	Brentwood Pkwy/Monarch Village Way	A	B	B	A
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	A	B	B	A

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from Harrel Dr/E Atlanta Rd to S Lee St

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The LOS in the eastbound direction is expected to improve from F to D during the PM peak hour.
- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The LOS in the eastbound direction is expected to improve from F to D during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd

- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 SB to I-75 NB

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The LOS in the northbound direction is expected to improve from E to A during the AM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the northbound direction is expected to improve from E to B during the PM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The LOS in the northbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy

- The LOS in both directions is expected to improve from E to B during both peak hours.

Walt Stephens Rd from proposed Reeves Creek Pkwy to Brentwood Pkwy/Monarch Village Way

- The LOS in the westbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the eastbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The LOS in the westbound direction is expected to improve from E to B during the AM peak hour.

4.7 Build Phase 2 (2035)

4.7.1 Build Phase 2 (2035) Capacity Analysis

The Build Phase 2 (2035) traffic volumes were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The existing geometry and programmed improvements described in Section 3.2 were employed for the intersection capacity analysis. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition was used for analysis. The Build Phase 2 (2035) Capacity Analysis was performed independent of Build Phase 1 (2029) capacity analysis. Table 22 shows the Build Phase 2 (2035) Capacity Analysis. Synchro output files are included in APPENDIX D.

All traffic signal timings remain the same as in existing conditions. Traffic signal timings used in analysis are shown in APPENDIX D.

Table 22: Build Phase 2 (2035) Capacity Analysis

Intersection	Control	Lane Group Movement	Build Phase 2 - 2035			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	129.8	F	212.5	F
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	76.1	E	136.6	F
SR 42-138/US 23/N Henry Blvd @ S Lee St	Traffic Signal	Intersection	1.1	A	1.7	A
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	175.2	F	189.7	F
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	106.7	F	244.0	F
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T+R	*	F	*	F
		WB L+T+R	*	F	*	F
		NB L	13.9	B	447.5	F
		SB L	17.4	C	13.0	B
		Intersection	1.2*	-	31.1*	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	56.0	E	147.3	F
SR 42/US 23/N Henry Blvd @ Valley Hill Rd	Traffic Signal	Intersection	13.4	B	12.9	B
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	Intersection	7.9	A	74.3	E
SR 138/Stockbridge Rd @ Daniel Dr	Traffic Signal	Intersection	11.3	B	25.4	C
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	137.6	F	875.5	F
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	167.5	F	217.3	F
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	113.8	F	229.7	F
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	5.3	A	64.2	E
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	57.3	E	148.2	F
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	90.1	F	34.9	C
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	46.1	D	123.8	F
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	148.9	F	70.4	E
SR 138/Lake Spivey Pkwy @ Spivey Rd	Traffic Signal	Intersection	34.2	C	22.0	C
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	14.0	B	9.1	A
		SB L+R	6685.9	F	290.2	F
		Intersection	1221.0	-	69.4	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	89.5	F	62.9	E
Walt Stephens Rd @ Monarch Village Way/Brentwood Pkwy	Traffic Signal	Intersection	57.5	E	38.0	D
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	88.3	F	221.9	F
Flippen Rd @ Banks Rd/Village Way	Traffic Signal	Intersection	22.8	C	23.2	C
Banks Rd @ Tye St	Side Street Stop Control	EB L	8.2	A	8.4	A
		SB L+R	18.5	C	22.2	C
		Intersection	2.2	-	2.7	-
Rock Quarry Rd @ Banks Rd/Carrington Ridge	Traffic Signal	Intersection	32.5	C	27.7	C
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	EB R	12.0	B	12.6	B
		WB R	10.2	B	11.0	B
		NB L	11.1	B	10.8	B
		SB L	8.7	A	9.3	A
		Intersection	1.5	-	2.4	-
Red Oak Rd @ Tye St	All-Way Stop Control	EB L+T+R	13.3	B	26.3	D
		WB L+T+R	12.2	B	12.4	B
		NB L+T+R	10.3	B	11.0	B
		SB L+T+R	11.4	B	12.4	B
		Intersection	**12.1**	**B**	**19.0**	**C**
Davidson Pkwy @ Walter Way	All-Way Stop Control	EB L	9.6	A	14.9	B
		EB T+R	13.4	B	227.9	F
		WB L	9.1	A	11.1	B
		WB T+R	33.1	D	115.7	F
		NB L+T+R	11.4	B	14.8	B
		SB L+T+R	10.4	B	19.9	C
		Intersection	**22.6**	**C**	**132.2**	**F**
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	EB L+T+R	104.1	F	701.5	F
		WB L+T+R	37.3	E	105.4	F
		NB L	8.8	A	11.2	B
		SB L	9.7	A	10.4	B
		Intersection	7.0	-	18.7	-
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	27.8	C	463.3	F
Walt Stephens Rd @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	12.7	B	39.5	D
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control	EB L+T+R	74.9	F	224.9	F
		WB L+T+R	71.4	F	291.2	F
		NB L	9.0	A	11.3	B
		SB L	9.2	A	9.9	A
		Intersection	7.7	-	9.4	-

*actual value too high to calculate

The following intersections are expected to experience inadequate LOS in Build Phase 2 (2035) Conditions during one or both peak hours:

SR 138 at SR 42/US 23/N Henry Blvd

- The intersection is expected to operate at LOS F during both peak hours.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd

- The intersection is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- The intersection is expected to operate at LOS F during both peak hours.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- The intersection is expected to operate at LOS F during both peak hours.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Eastbound and westbound left turn movements are expected to remain LOS F during both peak hours.
- The eastbound right turn movement and the northbound left turn movement also are expected to experience LOS F during the PM peak hour.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- The intersection is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

SR 138/Stockbridge Rd at Walter Way

- The intersection is expected to operate at LOS E during the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy

- The intersection is expected to operate at LOS F during both peak hours.

SR 138/Lake Spivey Pkwy at I-675 NB

- The intersection is expected to operate at LOS F during both peak hours.

SR 138/Lake Spivey Pkwy at I-675 SB

- The intersection is expected to operate at LOS F during both peak hours.

SR 138/Lake Spivey Pkwy at Mt Zion Rd

- The intersection is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB

- The intersection is expected to operate at LOS F during the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB

- The intersection is expected to operate at LOS F during the PM peak hour.

Walt Stephens Rd at Spivey Rd

- Southbound left turn movement and overall approach are expected to operate at LOS F during both peak hours.
- Delay in the AM peak hour is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

Walt Stephens Rd at Speer Rd/Blackhall Rd

- The intersection is expected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour.

Walt Stephens Rd at Monarch Village Way/Brentwood Pkwy

- The intersection is expected to operate at LOS E during the AM peak hour. However, the delay is 57.5 seconds, which is only 2.5 seconds from LOS D. No Improvements are recommended.

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- The intersection is expected to operate at LOS F during both peak hours.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour.

Davidson Pkwy at Walter Way

- The intersection is expected to operate at LOS F during the PM peak hour.

Flippen Rd at Fairhaven Rd

- Eastbound single-lane shared approach is expected to operate at LOS F during both peak hours.
- Westbound single-lane shared approach is expected to operate at LOS E during the AM peak hour and at LOS F during the PM peak hour.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

Davidson Pkwy at proposed Reeves Creek Pkwy

- The intersection LOS is expected to operate at LOS F during the PM peak hour.

Flippen Rd at Site Driveways 4 and 5

- Eastbound single-lane shared approach is expected to operate at LOS F during both peak hours.
- Westbound single-lane shared approach is expected to operate at LOS E during both peak hours.
- Delays in both scenarios is caused by left-turning vehicles experiencing severe delay in attempting to make the left turn movement onto the mainline. This is not uncommon for side street stop-controlled intersections.

4.7.2 Build Phase 2 (2035) Capacity Analysis Required Improvements

Improvements were identified for intersections with inadequate LOS in Build Phase 2 (2035) Conditions. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing. The results of the Build Phase 2 (2035) Conditions Required Improvements capacity analysis is shown in Table 23.

All traffic signal timings remain the same as in Background 2029 Conditions, except for the following:

- SR 42-138/US 23/North Henry Boulevard at SR 138/Stockbridge Road and Walmart driveway
  - Changed side street phasing from split phasing to leading protected+permissive left turns
- SR 138/Stockbridge Road at Davidson Parkway
  - Changed phasing from split phasing on side streets to one protected only northbound left turn and one protected+permissive southbound left turn phase on side streets due to proposed geometry change on northbound approach from a single northbound left turn lane to a six-lane left turn.
- Any intersection proposed to go from a single lane left turn to two or more left turn lanes received protected only left turn phasing for that approach.

The following improvements are needed for Build Phase 2 (2035) Conditions:

SR 138 at SR 42/US 23/N Henry Blvd

- Add 1 EBR lane, 1 WBL lane, 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd

- Add 1 EBT lane, 1 WBL lane, 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- Add 1 EBL lane, 1 EBR lane, 1 WBT lane, 1 WBR lane, 2 SBL lanes, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- Add 1 EBT lane, 1 WBL lane, 1 WBT lane, 1 NBL lane, 1 NBR lane

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- Add 1 EBR lane, 1 WBR lane, 1 SBR lane

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy

- Add 1 EBT lane, 1 SBT lane

SR 138/Stockbridge Rd at Walter Way

- Add 1 EBR lane

SR 138/Stockbridge Rd at Davidson Pkwy

- Add 5 NBL lanes, 1 NBR lane, 1 SBL lane, 3 EBT lanes, 3 WBT lanes

SR 138/Lake Spivey Pkwy at I-675 NB

- Add 1 EBL lane, 1 EBT lane, 1 WBT lane, 1 NBR lane

SR 138/Lake Spivey Pkwy at I-675 SB

- Add 1 EBT lane, 1 EBR lane, 1 WBT lane, 1 WBL lane, 1 SBL lane

SR 138/Lake Spivey Pkwy at Hannover Pkwy

- Add 1 EBT lane

SR 138/Lake Spivey Pkwy at Mt Zion Rd

- Add 1 EBT lane, 1 WBT lane, 1 SBL lane

SR 138/Lake Spivey Pkwy at I-75 NB

- Add 1 EBL lane, 1 WBR lane, 1 NBL lane

SR 138/Lake Spivey Pkwy at I-75 SB

- Add 1 SBL lane, 1 SBR lane

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy

- Add 1 EBT lane, 1 WBT lane, 1 NBR lane

Walt Stephens Rd at Spivey Rd

- Add 1 EBL lane, 1 WBR lane, 1 SBR lane

Walt Stephens Rd at Speer Rd/Blackhall Rd

- Add 1 WBR lane, 1 SBL lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- 1 free-flow EBR lane onto Flippen Rd SB, 1 EBL lane, 1 NBT lane, 1 NBL lane, 1 SBT lane, 1 SBR lane

Davidson Pkwy at Walter Way

- Add 1 EBT lane, 1 WBT lane, 1 SBR lane

Flippen Rd at Fairhaven Rd

- Add 1 EBR lane, 1 WBR lane

Davidson Pkwy at proposed Reeves Creek Pkwy

- Add 1 NBT lane, 1 SBT lane, 1 SBL lane, 1 EBR lane, 1 WBL lane

Walt Stephens Rd at proposed Reeves Creek Pkwy

- Add protected+permissive eastbound left turn phase

Flippen Rd at Site Driveways 4 and 5

- Add 1 EBR lane, 1 WBR lane

Table 23: Build Phase 2 (2035) Capacity Analysis with Improvements

Intersection	Control	Lane Group Movement	Build Phase 2 - 2035 Improved			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	Intersection	33.6	C	57.3	**E**
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	Intersection	32.5	C	27.0	C
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	Intersection	43.2	D	45.1	D
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	Intersection	29.7	C	45.3	D
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	EB L+T	*	F	*	F
		EB R	14.4	B	502.8	F
		EB Approach	*	F	*	F
		WB L+T	2986.7	F	*	F
		WB R	19.9	C	15.0	C
		WB Approach	**6294.2**	F	*	F
		NB L	13.9	B	447.5	F
		SB L	17.4	C	13.0	B
		Intersection	60.4*	-	31.1*	-
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/Walmart	Traffic Signal	Intersection	38.2	D	64.5	**E**
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	Intersection	7.7	A	49.0	D
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	22.7	C	57.2	E
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	47.2	D	34.3	C
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	38.7	D	53.0	D
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	7.4	A	27.8	C
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	22.4	C	17.1	B
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	34.9	C	24.1	C
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	Intersection	20.3	C	42.7	D
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	Intersection	43.2	D	44.1	D
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	EB L	14.0	B	9.1	A
		SB L	2925.3	F	109.7	F
		SB R	17.3	C	13.8	B
		SB Approach	**1697.2**	F	**51.2**	F
		Intersection	311.7	-	12.9	-
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	Intersection	27.9	C	41.9	D
Walt Stephens Rd @ Monarch Village Way/Brentwood Pkwy	Traffic Signal	Intersection	57.5	E	38.0	D
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	46.1	D	70.3	**E**
Davidson Pkwy @ Walter Way	All-Way Stop Control	EB L	10.5	B	17.7	C
		EB T	11.7	B	69.2	F
		EB T+R	11.0	B	24.7	C
		WB L	9.6	A	12.4	B
		WB T	16.0	C	36.5	E
		WB T+R	12.2	B	23.6	C
		NB L+T+R	12.7	B	17.0	C
		SB L+T	11.0	B	17.8	C
		SB R	10.2	B	17.3	C
		Intersection	**12.9**	B	**35.0**	D
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	EB L+T	131.2	F	777.9	F
		EB R	12.7	B	20.5	C
		EB Approach	**87.8**	F	**597.6**	F
		WB L+T	63.6	F	269.6	F
		WB R	17.4	C	17.9	C
		WB Approach	**26.6**	D	**58.8**	F
		NB L	8.8	A	11.2	B
		SB L	9.7	A	10.4	B
		Intersection	5.6	-	14.8	-
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	29.0	C	47.4	D
Walt Stephens Rd @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	13.9	B	48.3	D
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control	EB L+T	85.7	F	277.5	F
		EB R	13.5	B	21.2	C
		EB Approach	**53.9**	F	**165.4**	F
		WB L+T	75.0	F	299.5	F
		WB R	13.8	B	15.6	C
		WB Approach	**69.0**	F	**278.5**	F
		NB L	9.0	A	11.3	B
		SB L	9.2	A	9.9	A
		Intersection	6.0	-	7.8	-

*actual value too high to calculate

SR 138 at SR 42/US 23/N Henry Blvd
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to C in the AM peak hour and from F to E in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from E to C in the AM peak hour and from F to C in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in both peak hours.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to C in the AM peak hour and from F to D in the PM peak hour.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy
While the approach delays are reduced significantly, the addition of right turn lanes on both the eastbound and westbound approaches do not improve the LOS beyond F on either approach during either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd & Walmart Dwy
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from E to D in the AM peak hour and from F to E in the PM peak hour.

SR 138/Stockbridge Rd at Walter Way
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from E to D in the PM peak hour.

SR 138/Stockbridge Rd at Davidson Pkwy
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to C in the AM peak hour and from F to E in the PM peak hour. The LOS standard for this intersection for the PM peak hour is D. However, the delay (57.2 seconds) is only 2.2 seconds away from LOS D. No further changes were pursued at this intersection.

SR 138/Lake Spivey Pkwy at I-675 NB
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from F to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-675 SB
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in both peak hours.

SR 138/Lake Spivey Pkwy at Hannover Pkwy
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from E to C in the PM peak hour.

SR 138/Lake Spivey Pkwy at Mt Zion Rd
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from E to C in the AM peak hour and from F to B in the PM peak hour.

SR 138/Lake Spivey Pkwy at I-75 NB
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to C in the AM peak hour.

SR 138/Lake Spivey Pkwy at I-75 SB
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in the PM peak hour.

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from E to D in the PM peak hour.

Walt Stephens Rd at Spivey Rd
While the approach delay is reduced significantly, the addition of a right turn lane on the southbound approach does not improve the approach LOS beyond F in either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Walt Stephens Rd at Speer Rd/Blackhall Rd
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to C in the AM peak hour and from E to D in the PM peak hour.

Walt Stephens Rd at Brentwood Pkwy/Monarch Village Way
No lane additions were proposed at this intersection since the delay (57.5 seconds) only 2.5 seconds away from LOS D.

Flippen Rd at Walt Stephens Rd/Red Oak Rd
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in the AM peak hour and from F to E in the PM peak hour.

Davidson Pkwy at Walter Way
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in the PM peak hour. However, this is an all-way stop-controlled intersection. Should the traffic volume continue to grow, either a traffic signal or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT), should be investigated.

Flippen Rd at Fairhaven Rd
The required Build Phase 2 (2035) conditions improvements described above help to reduce the delays of both the eastbound and westbound approaches; however, only the westbound approach sees a significant change in LOS, improving from E to D. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or alternative intersection design,

including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

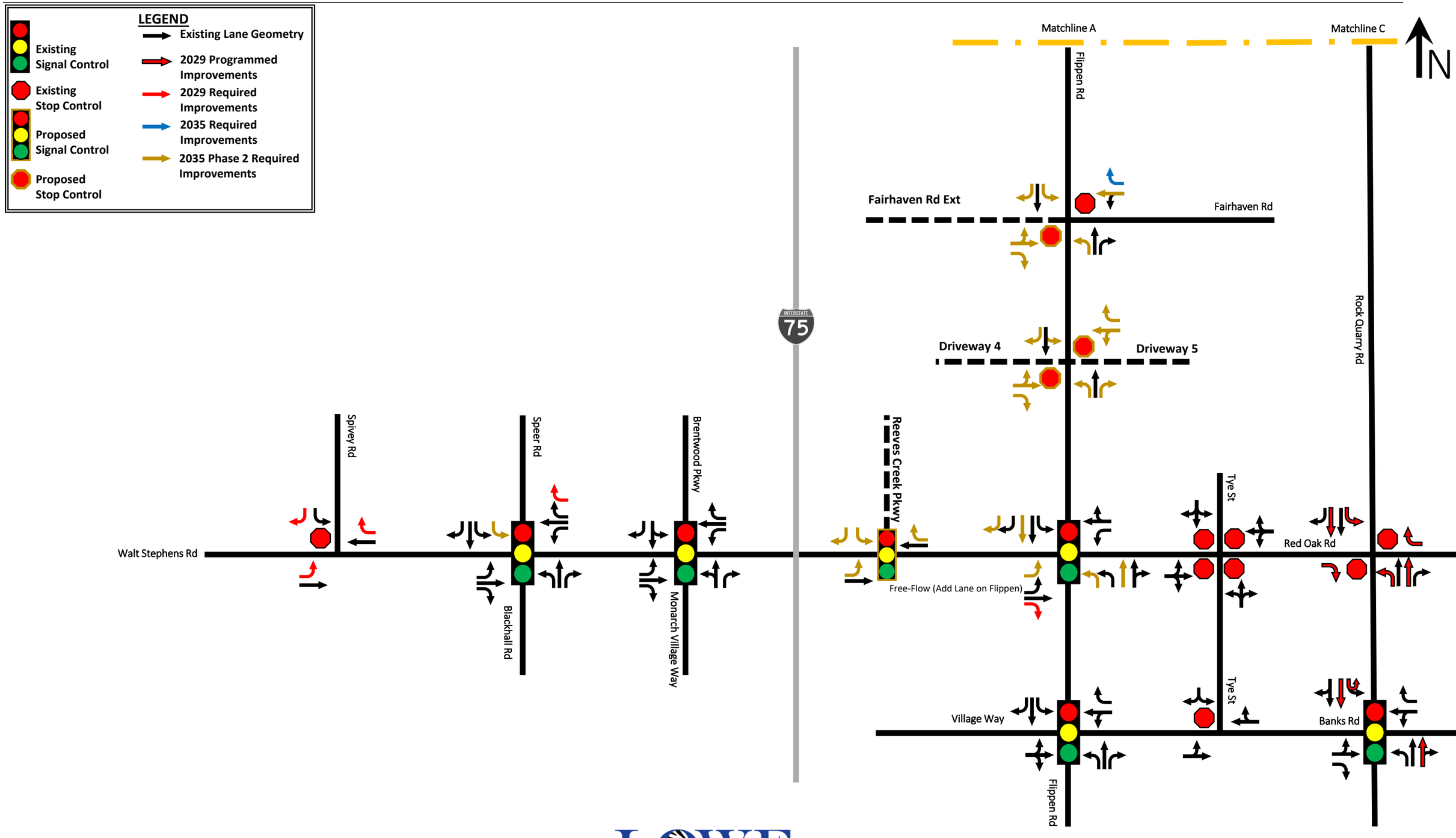
Davidson Pkwy at proposed Reeves Creek Pkwy
The required Build Phase 2 (2035) conditions improvements described above help to improve the LOS from F to D in the PM peak hour.

Walt Stephens Rd at proposed Reeves Creek Pkwy
The required Build Phase 2 (2035) conditions improvements described above helps to improve the LOS from F to D in the PM peak hour.

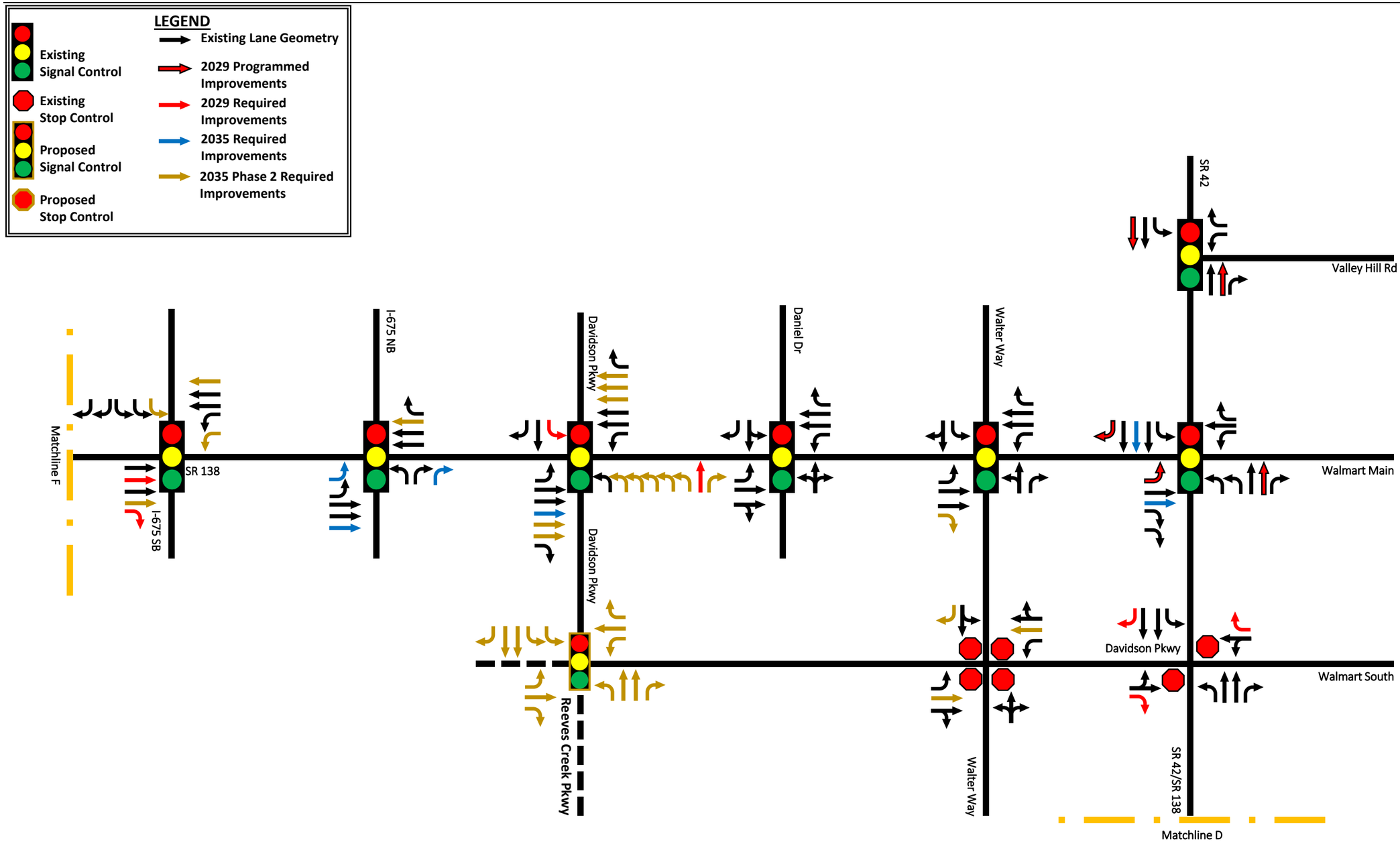
Flippen Rd at Site Driveways 4 and 5
The required Build Phase 2 (2035) conditions improvements described above help to reduce the delays of both the eastbound and westbound approaches; however, not beyond LOS F for either approach in either peak hour. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

The Build Phase 2 (2035) Lane Geometry is shown in Figure 16.

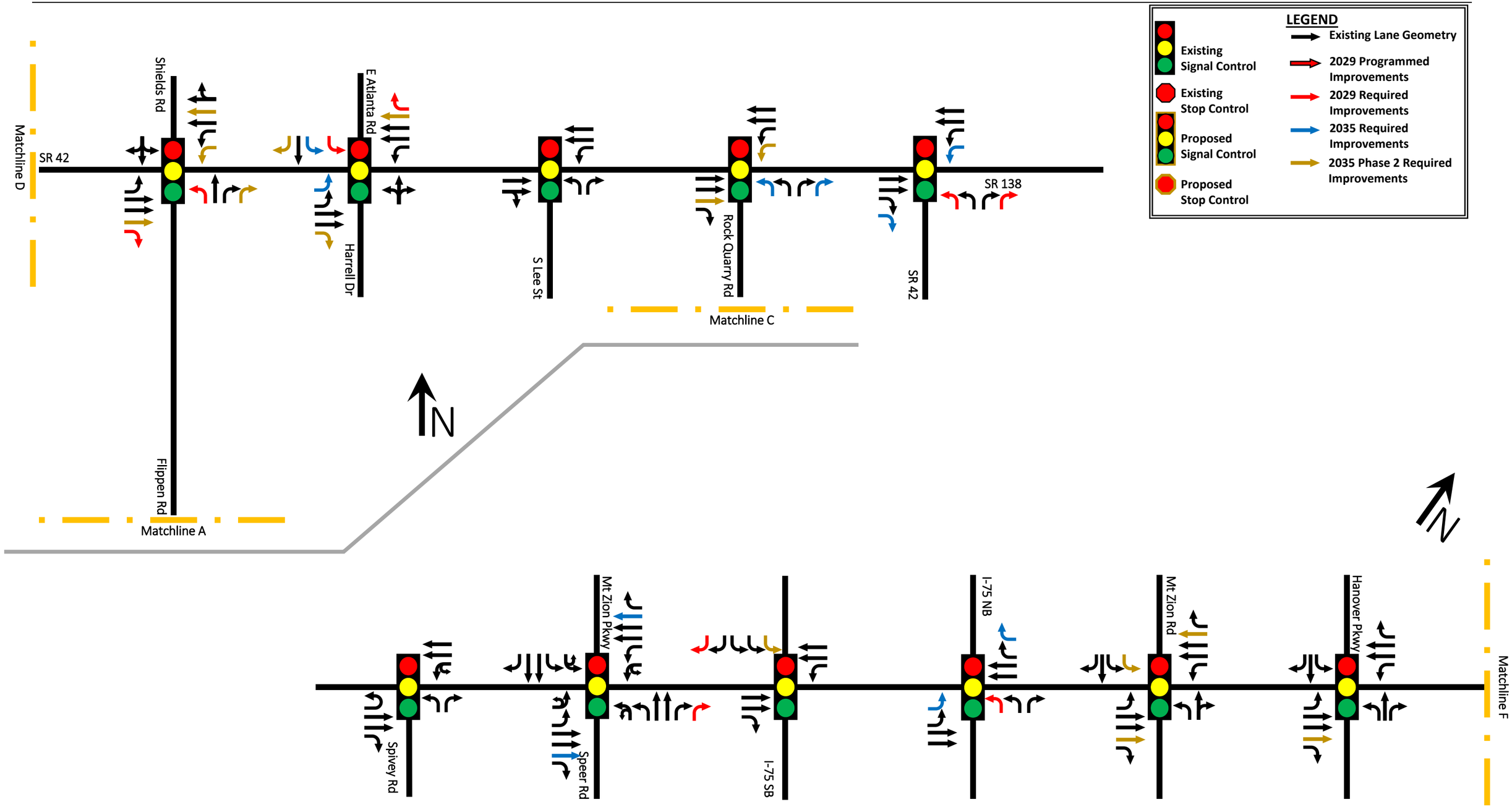
Reeves Creek DRI Build Phase 2 2035 Lane Geometry – Figure 16A



Reeves Creek DRI Build Phase 2 2035 Lane Geometry – Figure 16B



Reeves Creek DRI Build Phase 2 2035 Lane Geometry – Figure 16C



4.7.3 Build Phase 2 (2035) Segment Analysis

A segment capacity analysis was performed for all study roadway segments using HCS 7 software and HCM 6th Edition methodology. The existing geometry and programmed improvements described in Section 3.2 were employed for the segment analysis. The results of the segment analysis are summarized in Table 24. HCS 7 output files are included in APPENDIX D**.**

Table 24: Build Phase 2 (2035) Segment Analysis

				AM		PM	
#	**Segment**	**From**	**To**	NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	D	E	E	E
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	D	C	E	E
3	Banks Rd	Flippen Rd	Rock Quarry Rd	C	C	C	C
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd	A	B	B	B
5	SR 42/US 23/ N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd	B	A	B	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	B	E	E	D
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	C	D	E	D
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	C	D	E	D
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	C	D	E	D
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	C	D	E	C
11	SR 138/Stockbridge Rd	Walter Way	SR 42/US 23/N Henry Blvd	B	C	D	C
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	B	C	E	C
13	SR 138/Stockbridge Rd	Davidson Pkwy	Daniel Dr	B	C	D	C
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	D	E	F	F
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	E	D	F	E
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	D	D	E	E
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	D	D	E	E
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	D	E	E	E
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	E	C	E	D
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	E	C	D	E
21	SR 138/Lake Spivey Pkwy	Spivey Rd	Speer Rd/Mt Zion Pkwy	C	C	C	C
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	E	E	F	E
22B	Davidson Pkwy	*proposed* Reeves Creek Pkwy	SR 42-138/US 23/N Henry Blvd	B	D	E	D
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	E	B	C	E
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	C	C	B	B
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd	B	B	C	B
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	E	E	E	E
26B	Walt Stephens Rd	*proposed* Reeves Creek Pkwy	Brentwood Pkwy/Monarch Village Way	E	E	E	E
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	D	E	E	E
28	Walt Stephens Rd	Spivey Rd	Speer Rd/Blackhall Rd	C	D	D	C

The following segments are expected to experience inadequate LOS in Build Phase 2 (2035) Conditions during one or both peak hours:

Flippen Rd from Banks Rd to Walt Stephens Rd/Red Oak Rd

- The segment is expected to operate at LOS E during the AM peak hour in the southbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in both directions
- LOS standard for Background and Build conditions is LOS E during the PM peak hour in the southbound direction.

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in both directions.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The segment is expected to operate at LOS E during the AM peak hour in the westbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from Flippen Rd to Harrel Dr/E Atlanta Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from Harrel Dr/E Atlanta Rd to S Lee St

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from S Lee St to Rock Quarry Rd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 42-138/US 23/N Henry Blvd from Rock Quarry Rd to SR 42/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Stockbridge Rd from Daniel Dr to Walter Way

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The segment is expected to operate at LOS E during the AM peak hour in the westbound direction.
- The segment is expected to operate at LOS F during the PM peak hour in both directions.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The segment is expected to operate at LOS E during the AM peak hour in the eastbound direction.
- The segment is expected to operate at LOS F during the PM peak hour in the eastbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the westbound direction.

SR 138/Lake Spivey Pkwy from Hannover Pkwy to I-675 SB

- The segment is expected to operate at LOS E during the PM peak hour in both directions.

SR 138/Lake Spivey Pkwy from Mt Zion Rd to Hannover Pkwy

- The segment is expected to operate at LOS E during the PM peak hour in both directions.

SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd

- The segment is expected to operate at LOS E during the AM peak hour in the westbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in both directions.

SR 138/Lake Spivey Pkwy from I-75 SB to I-75 NB

- The segment is expected to operate at LOS E during both peak hours in the eastbound direction.

SR 138/Lake Spivey Pkwy from Speer Rd/Mt Zion Pkwy to I-75 SB

- The segment is expected to operate at LOS E during the AM peak hour in the eastbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the westbound direction.

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The segment is expected to operate at LOS E during the AM peak hour in both directions.
- The segment is expected to operate at LOS F during the PM peak hour in the northbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.

Davidson Pkwy from proposed Reeves Creek Pkwy to SR 42-138/US 23/N Henry Blvd

- The segment is expected to operate at LOS E during the PM peak hour in the eastbound direction.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The segment is expected to operate at LOS E during the AM peak hour in the northbound direction.
- The segment is expected to operate at LOS E during the PM peak hour in the southbound direction.

Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy

- The segment is expected to operate at LOS E in both directions during both peak hours.

Walt Stephens Rd from proposed Reeves Creek Pkwy to Brentwood Pkwy/Monarch Village Way

- The segment is expected to operate at LOS E in both directions during both peak hours.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The segment is expected to operate at LOS E in the westbound direction during both peak hours.
- The segment is expected to operate at LOS E in the eastbound direction during the PM peak hour.
- LOS standard for Background and Build conditions is LOS E during the PM peak hour in the eastbound direction.

4.7.4 Build Phase 2 (2035) Segment Analysis Required Improvements

At roadway segments that are expected to experience inadequate LOS in Build Phase 2 (2035) conditions, one lane was added to mitigate the inadequate LOS. The results of the Build Phase 2 (2035) Segment Analysis with Improvements are shown below in Table 25.

Table 25: Build Phase 2 (2035) Segment Analysis with Improvements

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	B	B	B	B
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	A	A	B	B
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	B	C	D	C
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	B	-	C	-
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	B	-	D	-
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	B	-	D	-
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	B	-	C	-
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	A	-	C	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	C	C	D	D
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	C	C	D	C
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	C	C	C	C
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	C	C	C	C
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	C	C	C	D
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	C	-	D	-
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	C	B	C	C
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	B	B	C	B
22B	Davidson Pkwy	*proposed* Reeves Creek Pkwy	SR 42-138/US 23/N Henry Blvd	A	-	B	-
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	B	A	A	B
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	B	B	C	B
26B	Walt Stephens Rd	*proposed* Reeves Creek Pkwy	Brentwood Pkwy/Monarch Village Way	B	B	B	B
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	A	B	B	B

Flippen Rd from Banks Rd to Walt Stephens Rd/Red Oak Rd

- The LOS in both directions is expected to improve from E to B during both peak hours.

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The LOS in both directions is expected to improve from E to B during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from SR 138/Stockbridge Rd to Flippen Rd

- The LOS in the westbound direction is expected to improve from E to C during the AM peak hour
- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from Flippen Rd to Harrel Dr/E Atlanta Rd

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from Harrel Dr/E Atlanta Rd to S Lee St

- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from S Lee St to Rock Quarry Rd

- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 42-138/US 23/N Henry Blvd from Rock Quarry Rd to SR 42/US 23/N Henry Blvd

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Stockbridge Rd from Daniel Dr to Walter Way

- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The LOS in the eastbound direction is expected to improve from E to C during the AM peak hour.
- The LOS in both directions is expected to improve from F to D during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB

- The LOS in the eastbound direction is expected to improve from F to D during the PM peak hour.
- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from Hannover Pkwy to I-675 SB

- The LOS in both directions is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from Mt Zion Rd to Hannover Pkwy

- The LOS in both directions is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd

- The LOS in the westbound direction is expected to improve from E to C during the AM peak hour.
- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.
- The LOS in the westbound direction is expected to improve from E to D during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 SB to I-75 NB

- The LOS in the eastbound direction is expected to improve from E to C during the AM peak hour.
- The LOS in the eastbound direction is expected to improve from E to D during the PM peak hour.

SR 138/Lake Spivey Pkwy from Speer Rd/Mt Zion Pkwy to I-75 SB

- The LOS in the eastbound direction is expected to improve from E to C during the AM peak hour.
- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The LOS in the northbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the northbound direction is expected to improve from F to C during the PM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Davidson Pkwy from proposed Reeves Creek Pkwy to SR 42-138/US 23/N Henry Blvd

- The LOS in the eastbound direction is expected to improve from E to B during the PM peak hour.

Speer Rd from Walt Stephens Rd to SR 138/Lake Spivey Pkwy

- The LOS in the northbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy

- The LOS in both directions is expected to improve from E to B during the AM peak hour.
- The LOS in the eastbound direction is expected to improve from E to C during the PM peak hour.
- The LOS in the westbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from proposed Reeves Creek Pkwy to Brentwood Pkwy/Monarch Village Way

- The LOS in both directions is expected to improve from E to B during both peak hours.

Walt Stephens Rd from Speer Rd/Blackhall Rd to Brentwood Pkwy/Monarch Village Way

- The LOS in the westbound direction is expected to improve from E to B during both peak hours.

4.8 Proposed Interstate 75 Northbound-Only Interchange

A northbound-only (exit from and entrance to I-75 northbound only) interchange at Walt Stephens Road just east of I-75 has been proposed on the site plan for this project. The proposed northbound-only interchange is proposed to align with the proposed Reeves Creek Parkway. Given the very early stage of the project at this time, the typically lengthy process of getting a new interchange approved through Federal HighWay Administration (FHWA) (a process that would require an Interchange Justification Report (IJR)), and no guarantee that an interchange serving only one direction would even be considered, the analysis was performed with and without the northbound-only interchange. FHWA typically will approve interchanges that only face one direction (i.e., northbound entrance and southbound exit), but it is unknown if FHWA would approve such an interchange serving only one direction of travel.

Not all study intersections would be impacted by the presence, or lack thereof, of I-75 northbound-only interchange access. The intersections that would be expected to be impacted by the presence of I-75 northbound-only interchange access, are the following:

- SR 138/Stockbridge Rd at Davidson Pkwy
- SR 138/Lake Spivey Pkwy at I-675 NB
- SR 138/Lake Spivey Pkwy at I-675 SB
- SR 138/Lake Spivey Pkwy at Hannover Pkwy
- SR 138/Lake Spivey Pkwy at Mt Zion Rd
- SR 138/Lake Spivey Pkwy at I-75 NB
- Flippen Rd at Walt Stephens Rd/Red Oak Rd
- Flippen Rd at Fairhaven Rd
- Davidson Pkwy at proposed Reeves Creek Pkwy
- Walt Stephens Rd at proposed Reeves Creek Pkwy
- Flippen Rd at Site Driveways 4 and 5

The roadway segments that would be expected to be impacted by the presence of I-75 northbound-only interchange access are the following:

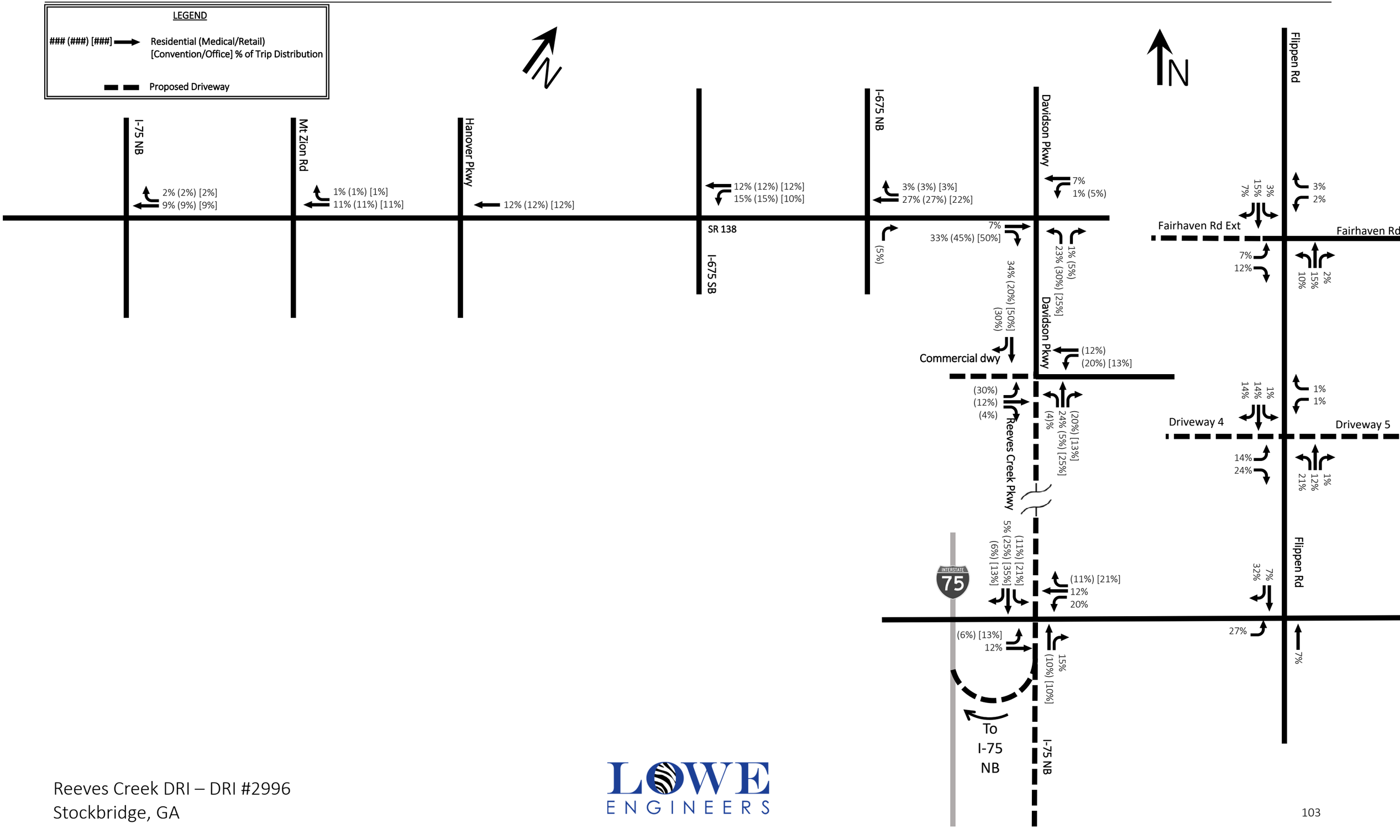
- Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd (northbound only)
- SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy (both directions)
- SR 138/Lake Spivey Pkwy from I-675 SB to I-675 NB (westbound only)
- SR 138/Lake Spivey Pkwy from Hannover Pkwy to I-675 SB (westbound only)
- SR 138/Lake Spivey Pkwy from Mt Zion Rd to Hannover Pkwy (westbound only)
- SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd (westbound only)
- Davidson Pkwy from SR 138/Stockbridge Rd to proposed Reeves Creek Pkwy (both directions)
- Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy (both directions)

The trip distribution for the study intersections expected to be affected by the presence of an I-75 northbound-only interchange is shown below in Figure 17.

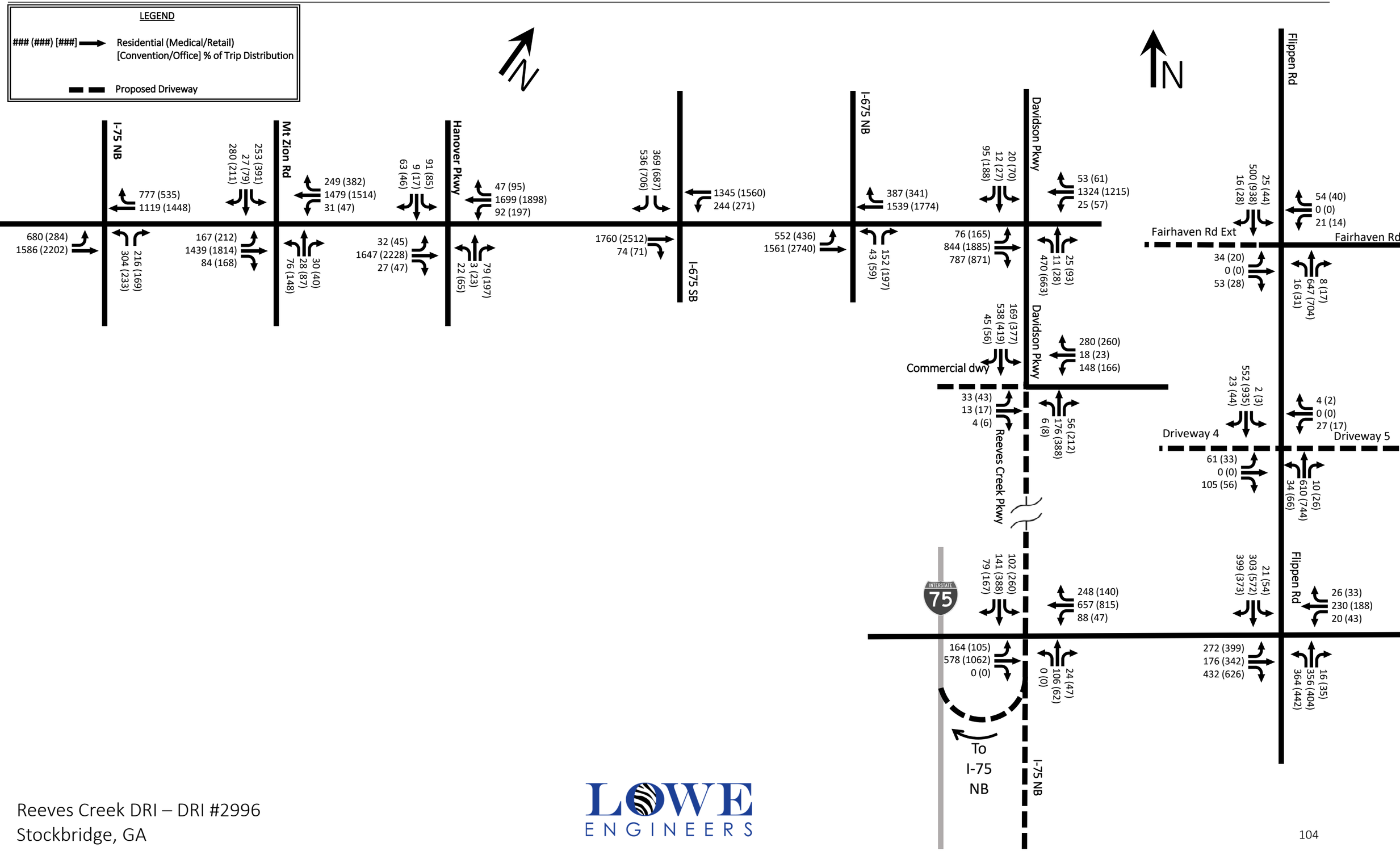
The total Build Phase 1 (2029) traffic volumes expected for the study intersections expected to be affected by the presence of an I-75 northbound-only interchange are shown below in Figure 18.

The total Build Phase 2 (2035) traffic volumes expected for the study intersections expected to be affected by the presence of an I-75 northbound-only interchange are shown below in Figure 19.

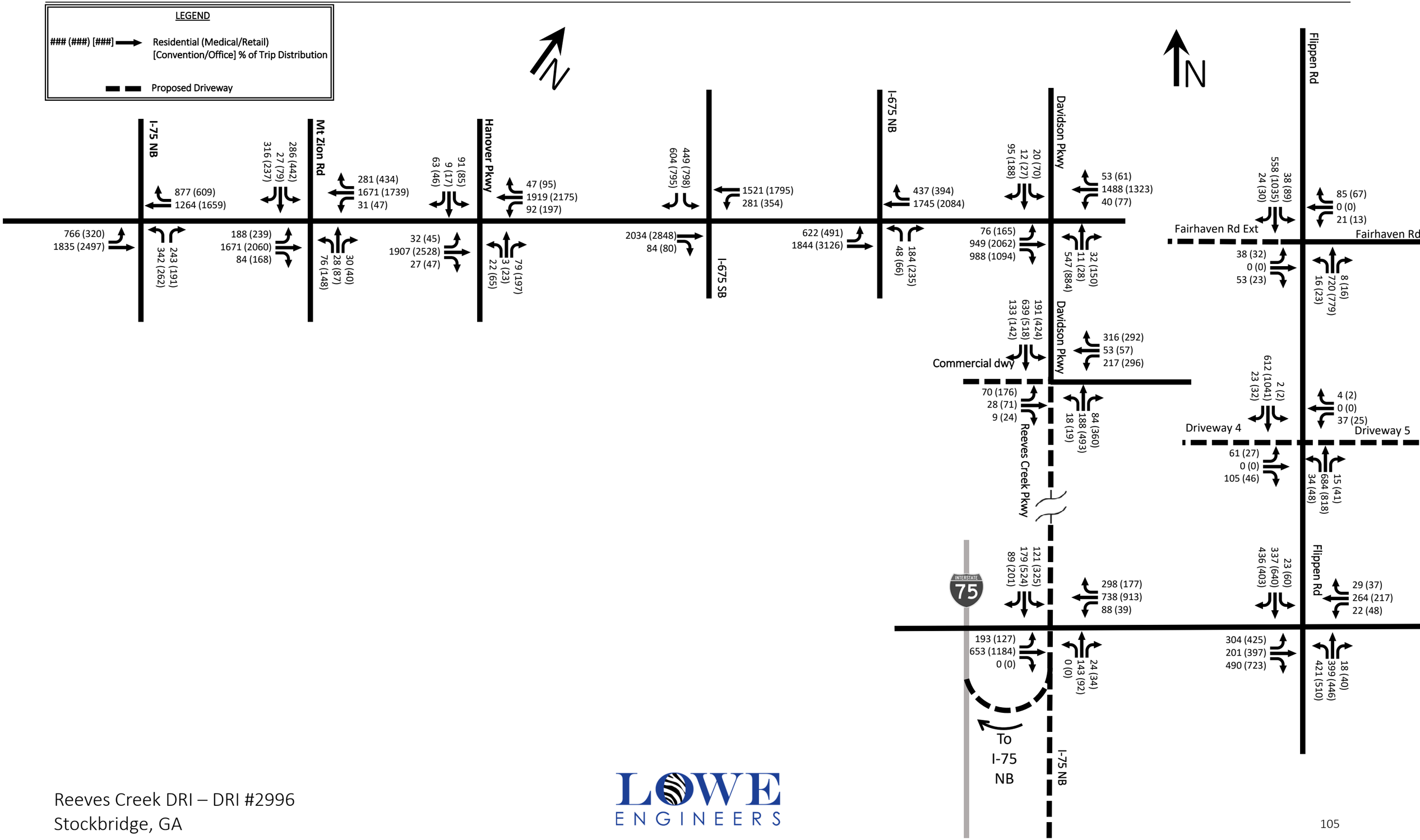
Reeves Creek DRI Trip Distribution with I-75 NB Interchange – Figure 17



Reeves Creek DRI Build Phase 1 2029 with I-75 NB Interchange – Figure 18



Reeves Creek DRI Build Phase 2 2035 with I-75 NB Interchange – Figure 19



4.8.1 Build Phase 1 2029 Capacity Analysis and Required Improvements – I-75 NB Interchange

The Build Phase 1 (2029) traffic volumes with the proposed I-75 northbound-only interchange were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition was used for analysis. Synchro output files are included in APPENDIX D.

The Background 2029 with Improvements Conditions described in Section 3.3.2 were employed as a base to determine necessary improvements for the Build Phase 1 (2029) Capacity Analysis with the proposed I-75 northbound-only interchange. Improvements were identified to bring the intersections affected by the presence of the proposed I-75 northbound-only interchange to adequate LOS in Build Phase 1 (2029) Conditions with the proposed I-75 northbound-only interchange. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing.

All traffic signal timings remain the same as in 2029 Background Improved conditions, except for the following:

- SR 138/Stockbridge Road at Davidson Parkway
  - Changed phasing from permitted phasing on side streets to one protected only northbound left turn and one protected+permissive southbound left turn phase on side streets due to proposed geometry change on northbound approach from a single northbound left turn lane to a triple left turn lane.
- Walt Stephens Rd at proposed Reeves Creek Pkwy
  - Added protected+permissive eastbound left turn phase.

Traffic signal timings used in analysis are shown in APPENDIX D.

The following geometric improvements were implemented to bring the intersections affected by the presence of the proposed I-75 northbound-only interchange to adequate LOS in Build Phase 1 (2029) Conditions with the proposed I-75 northbound-only interchange:

SR 138/Stockbridge Rd at Davidson Pkwy
- Add 1 EBT lane, 1 WBT lane, 2 NBL lanes

SR 138/Lake Spivey Pkwy at I-675 NB
- Add 1 EBT lane, 1 NBR lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd
- Add 1 NBL lane, 1 SBR lane, 1 EBL lane

Flippen Rd at Fairhaven Rd
- Add 1 EBR lane, 1 WBR lane

Walt Stephens Rd at proposed Reeves Creek Pkwy/proposed I-75 NB
- Add Eastbound protected+permissive left turn phase, add 1 EBT lane, 1 WBT lane, 1 SBT lane

Flippen Rd at Site Driveways 4 and 5
- Add 1 EBR lane, 1 WBR lane

Table 26 shows the Build Phase 1 (2029) Capacity Analysis with the proposed I-75 northbound-only interchange with necessary improvements.

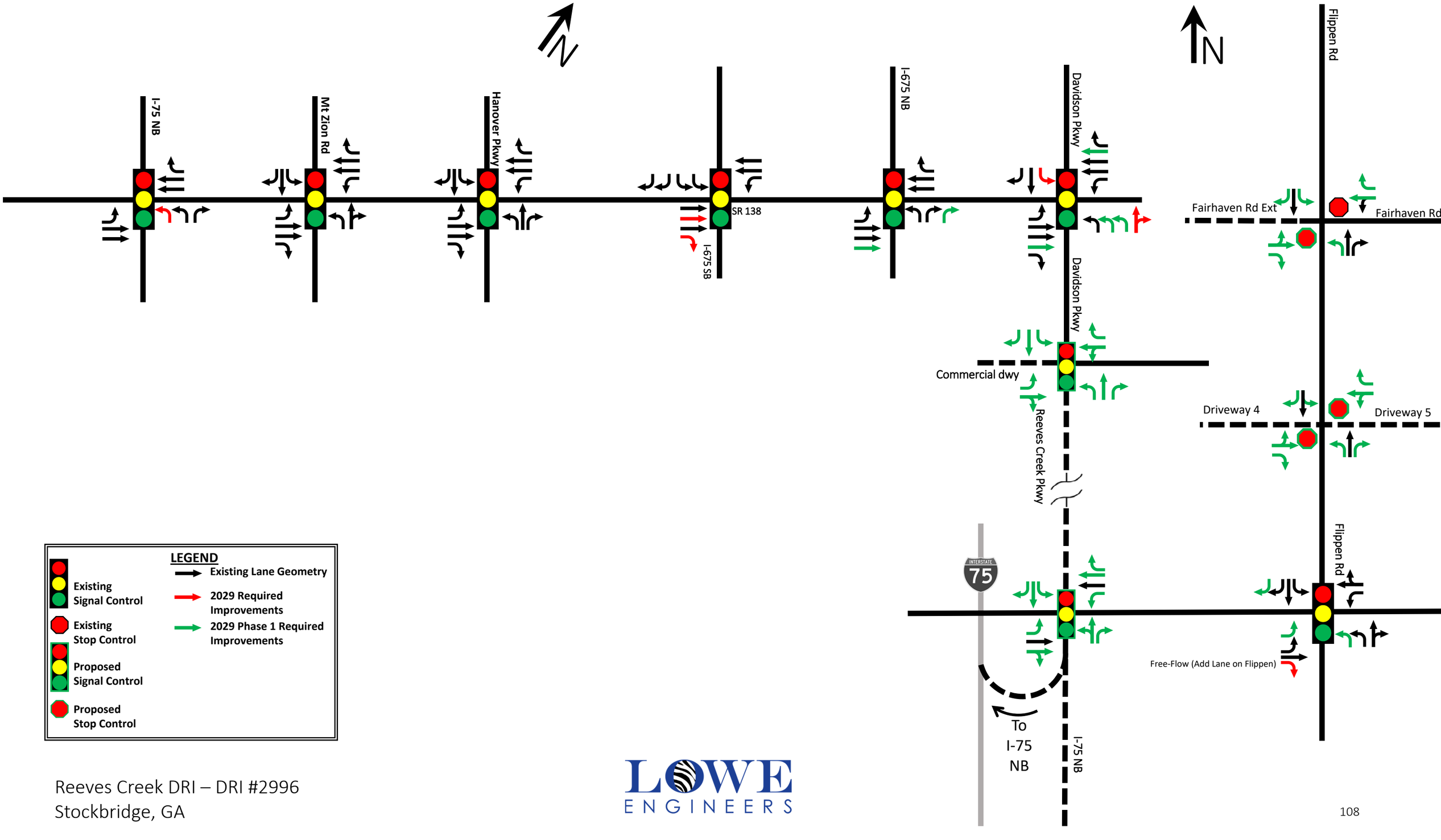
Table 26: Build Phase 1 (2029) Capacity Analysis Required Improvements - I-75 NB Interchange

Intersection	Control	Lane Group Movement	Build Phase 1 2029 - I-75 NB Int.			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	15.0	B	51.0	D
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	51.7	D	36.2	D
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	21.1	C	40.5	D
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	5.4	A	17.4	B
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	21.7	C	45.6	D
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	45.1	D	8.3	A
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	43.7	D	58.4	**E**
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	EB L+T	63.1	F	206.5	F
		EB R	12.6	B	19.4	C
		EB Approach	**32.3**	**D**	**97.4**	F
		WB L+T	51.6	F	173.1	F
		WB R	14.8	B	15.3	C
		WB Approach	**25.1**	**D**	**56.2**	F
		NB L	8.6	A	10.8	B
		SB L	9.3	A	9.6	A
		Intersection	3.7	-	4.5	-
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	23.3	C	29.9	C
Walt Stephens Rd @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	22.0	C	26.5	C
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control	EB L+T	70.3	F	281.9	F
		EB R	14.5	B	21.3	C
		EB Approach	**35.0**	**E**	**117.9**	F
		WB L+T	72.3	F	271.0	F
		WB R	13.0	B	14.7	B
		WB Approach	**64.6**	**F**	**244.0**	F
		NB L	8.9	A	11.3	B
		SB L	8.9	A	9.6	A
		Intersection	5.7	-	8.2	-

Except for the unsignalized site driveways on Flippen Road at Fairhaven Road and Flippen Road at Site Driveways, all study intersections affected by the presence of the proposed I-75 northbound-only interchange are expected to operate at LOS D or better. The intersection of Flippen Road at Walt Stephens Road/Red Oak Road operates at LOS E during the PM peak hour, but since the Existing LOS at this intersection is F, the LOS standard for Background and Build conditions for the PM peak hour is E.

Figure 20 shows the required lane geometry for Build Phase 1 (2029) with the proposed I-75 northbound-only interchange.

Reeves Creek DRI Build Phase 1 (2029) Lane Geometry with I-75 NB Interchange – Figure 20



LEGEND

- Existing Lane Geometry
- 2029 Required Improvements
- 2029 Phase 1 Required Improvements
- Existing Signal Control
- Existing Stop Control
- Proposed Signal Control
- Proposed Stop Control

Reeves Creek DRI – DRI #2996
Stockbridge, GA

LOWE ENGINEERS

4.8.2 Build Phase 1 2029 Segment Analysis and Required Improvements – I-75 NB Interchange

A segment capacity analysis was performed for all study roadway segments using HCS 7 software and HCM 6th Edition methodology. The Background 2029 with Improvements Conditions described in Section 3.3.4 were employed initially for the Build Phase 1 (2029) with the proposed I-75 northbound only interchange Segment Analysis to determine necessary improvements. The results of the segment analysis are summarized in Table 27. HCS 7 output files are included in APPENDIX D.

Table 27: Build Phase 1 (2029) Segment Analysis – I-75 NB Interchange

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	D	-	D	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	B	D	D	D
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	-	C	-	D
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	-	C	-	D
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	-	C	-	D
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	-	D	-	D
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	C	E	E	E
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	B	E	B	E

The following segments are expected to experience inadequate LOS in Build Phase 1 (2029) Conditions during one or both peak hours:

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The segment analyzed as a two-lane section is expected to operate at LOS E during both peak hours in the westbound direction and at LOS E during the PM peak hour in the eastbound direction.

Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy

- The segment is expected to operate at LOS E in the westbound direction during both peak hours.

One lane was added to mitigate the inadequate LOS. The results of the Build Phase 1 (2029) Segment Analysis with Improvements are shown below in Table 28.

Table 28: Build Phase 1 (2029) Segment Analysis Required Improvements – I-75 NB Interchange

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	A	A	A	B
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	-	B	-	B

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The LOS in the southbound direction is expected to improve from E to A during the AM peak hour.
- The LOS in the northbound direction is expected to improve from E to A during the PM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

Walt Stephens Rd from Flippen Rd to proposed Reeves Creek Pkwy

- The LOS in the westbound direction is expected to improve from E to B during both peak hours.

4.8.3 Build Phase 2 2035 Capacity Analysis and Required Improvements – I-75 NB Interchange

The Build Phase 2 (2035) traffic volumes with the proposed I-75 northbound-only interchange were analyzed using a Synchro 10.0 model to determine the capacity of the AM and PM peak hours. The results are shown by lane group movement and total intersection capacity. Average vehicular delays are shown in seconds. Level of service (LOS) is a grading system as defined by the Highway Capacity Manual (HCM) where A is best, and F is worst. The HCM 6th Edition was used for analysis. Synchro output files are included in APPENDIX D.

The Background 2035 with Improvements Conditions described in Section 3.4.2 were employed as a base to determine necessary improvements for the Build Phase 2 (2035) Capacity Analysis with the proposed I-75 northbound-only interchange. Improvements were identified to bring the intersections affected by the presence of the proposed I-75 northbound-only interchange to adequate LOS in Build Phase 2 (2035) Conditions with the proposed I-75 northbound-only interchange. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing.

All traffic signal timings remain the same as in 2035 Background Improved conditions, except for the following:

- SR 138/Stockbridge Road at Davidson Parkway
  - Changed phasing from permitted phasing on side streets to one protected only northbound left turn and one protected+permissive southbound left turn phase on side streets due to proposed geometry change on northbound approach from a single northbound left turn lane to a quadruple left turn lane.
- Walt Stephens Rd at proposed Reeves Creek Pkwy
  - Added protected+permissive eastbound left turn phase.

Traffic signal timings used in analysis are shown in APPENDIX D.

The following geometric improvements were implemented to bring the intersections affected by the presence of the proposed I-75 northbound-only interchange to adequate LOS in Build Phase 2 (2035) Conditions with the proposed I-75 northbound-only interchange:

SR 138/Stockbridge Rd at Davidson Pkwy
- Add 1 WBT lane, 3 NBL lanes

SR 138/Lake Spivey Pkwy at I-675 NB
- Add 1 WBT lane

SR 138/Lake Spivey Pkwy at I-675 SB
- Add 1 EBT lane, 1 WBL lane, 1 SBL lane

SR 138/Lake Spivey Pkwy at Mt Zion Rd
- Add 1 EBT lane, 1 SBL lane

SR 138/Lake Spivey Pkwy at I-75 NB
- Add 1 WBT lane

Flippen Rd at Walt Stephens Rd/Red Oak Rd
- Add 1 NBT lane, 1 NBL lane, 1 SBT lane, 1 SBR lane, 1 EBL lane, 1 WBR lane

Flippen Rd at Fairhaven Rd
- Add 1 EBR lane

Davidson Pkwy at proposed Reeves Creek Pkwy

- Add 1 SBL lane, 1 EBR lane, 1 WBL lane

Walt Stephens Rd at proposed Reeves Creek Pkwy/proposed I-75 NB

- Add Eastbound protected+permissive left turn phase, add 1 EBT lane, 1 WBT lane, 1 SBT lane

Flippen Rd at Site Driveways 4 and 5

- Add 1 EBR lane, 1 WBR lane

Table 29 shows the Build Phase 2 (2035) Capacity Analysis with the proposed I-75 northbound-only interchange with necessary improvements.

Table 29: Build Phase 2 (2035) Capacity Analysis Required Improvements - I-75 NB Interchange

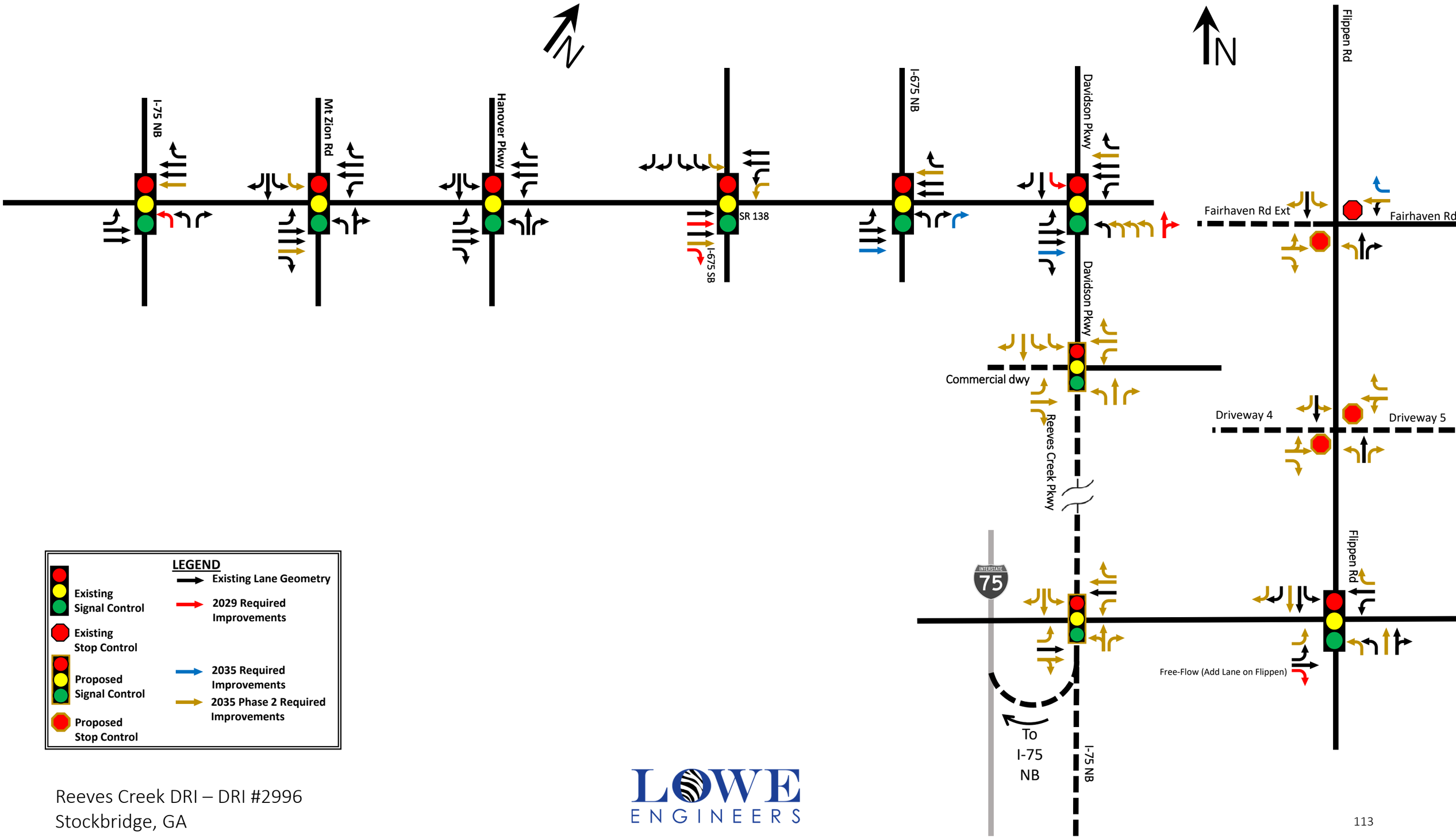
Intersection	Control	Lane Group Movement	Build Phase 2 2035 - I-75 NB Int.			
			AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	Intersection	14.5	B	53.8	D
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	Intersection	35.9	D	30.1	C
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	Intersection	32.5	C	51.7	D
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	Intersection	6.3	A	46.9	D
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	Intersection	35.6	C	42.3	D
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	Intersection	43.4	D	24.9	C
Flippen Rd @ Walt Stephens Rd/Red Oak Rd	Traffic Signal	Intersection	56.8	E	73.2	E
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	EB L+T	138.7	F	835.5	F
		EB R	13.3	B	21.5	C
		EB Approach	**65.7**	**F**	**495.1**	**F**
		WB L+T	76.0	F	347.0	F
		WB R	17.4	C	17.9	C
		WB Approach	**29.0**	**D**	**71.4**	**F**
		NB L	8.9	A	11.3	B
		SB L	9.7	A	10.4	B
		Intersection	6.1	-	16.2	-
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	30.1	C	43.9	D
Walt Stephens Rd @ *proposed* Reeves Creek Pkwy	Traffic Signal	Intersection	24.0	C	31.8	C
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control	EB L+T	110.8	F	357.4	F
		EB R	15.7	C	23.9	C
		EB Approach	**50.6**	**F**	**147.2**	**F**
		WB L+T	135.3	F	503.6	F
		WB R	13.9	B	15.8	C
		WB Approach	**123.5**	**F**	**467.5**	**F**
		NB L	9.2	A	11.7	B
		SB L	9.3	A	10.0	A
		Intersection	8.7	-	11.5	-

Except for the intersections of Flippen Road at Fairhaven Road, Flippen Road at Site Driveways, and Flippen Road at Walt Stephens Road/Red Oak Road, all study intersections affected by the presence of

the proposed I-75 northbound-only interchange are expected to operate at LOS D or better. The intersection of Flippen Road at Walt Stephens Road/Red Oak Road operates at LOS E during both peak hours, but in the AM peak hour, the LOS is only 1.8 seconds away from LOS D. Since the Existing LOS at this intersection is F during the PM peak hour, the LOS standard for Background and Build conditions for the PM peak hour is E.

Figure 21 shows the required lane geometry for Build Phase 1 (2029) with the proposed I-75 northbound-only interchange.

Reeves Creek DRI Build Phase 2 (2035) Lane Geometry with I-75 NB Interchange – Figure 21



LEGEND

- Existing Signal Control
- Existing Stop Control
- Proposed Signal Control
- Proposed Stop Control
- Existing Lane Geometry
- 2029 Required Improvements
- 2035 Required Improvements
- 2035 Phase 2 Required Improvements

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4.8.4 Build Phase 2 2035 Segment Analysis and Required Improvements – I-75 NB Interchange

A segment capacity analysis was performed for all study roadway segments using HCS 7 software and HCM 6th Edition methodology. The Background 2035 with Improvements Conditions described in Section 3.4.4 were employed initially for the Build Phase 2 (2035) with the proposed I-75 northbound only interchange Segment Analysis to determine necessary improvements. The results of the segment analysis are summarized in. HCS 7 output files are included in APPENDIX D**.**

Table 30: Build Phase 2 (2035) Segment Analysis – I-75 NB Interchange

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	D	-	E	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	C	D	D	E
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	-	D	-	D
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	-	D	-	D
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	-	D	-	D
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	-	D	-	E
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	D	E	E	E
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	B	B	C	B

The following segments are expected to experience inadequate LOS in Build Phase 2 (2035) Conditions during one or both peak hours:

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/US 23/N Henry Blvd

- The segment is expected to operate at LOS E in the northbound direction during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The segment is expected to operate at LOS E in the westbound direction during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd

- The segment is expected to operate at LOS E in the westbound direction during the PM peak hour.

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The segment is expected to operate at LOS E during both peak hours in the westbound direction and at LOS E during the PM peak hour in the eastbound direction.

One lane was added to mitigate the inadequate LOS. The results of the Build Phase 2 (2035) Segment Analysis with Improvements are shown below in Table 31.

Table 31: Build Phase 1 (2029) Segment Analysis Required Improvements – I-75 NB Interchange

				AM		PM	
#	Segment	From	To	NB / EB	SB / WB	NB / EB	SB / WB
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	A	-	B	-
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	C	C	D	C
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	-	C	-	C
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	A	B	B	B

Flippen Rd from Walt Stephens Rd/Red Oak Rd to SR 42-138/N Henry Blvd

- The LOS in the northbound direction is expected to improve from E to B during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-675 NB to Davidson Pkwy

- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

SR 138/Lake Spivey Pkwy from I-75 NB to Mt Zion Rd

- The LOS in the westbound direction is expected to improve from E to C during the PM peak hour.

Davidson Pkwy from SR 138/Lake Spivey Pkwy to proposed Reeves Creek Pkwy

- The LOS in the southbound direction is expected to improve from E to B during the AM peak hour.
- The LOS in the northbound direction is expected to improve from E to B during the PM peak hour.
- The LOS in the southbound direction is expected to improve from E to B during the PM peak hour.

5 Conclusions

The proposed development is a mixed-use site located in northern Henry County, GA, near the City of Stockbridge and the I-75/I-675 interchange. The development will be located to the east of I-75 and I-675 and south of SR 138/Stockbridge Road. The proposed development is anticipated to be completed in two phases. Phase 1 is expected to be completed by 2029, and full build-out (Phase 2) in 2035. Both scenarios were analyzed for this report. A northbound-only interchange with I-75 has also been proposed to align with the proposed Reeves Creek Parkway on Walt Stephens Road on the southern end of the site. Both Phase 1 and Phase 2 were analyzed with and without the proposed northbound-only interchange.

The results of the segment analysis, capacity analysis, and summary of mitigation are below.

Table 32 shows the necessary Number of Lanes by study segment by scenario for the project. Shaded cells indicate when the lane addition is first needed.

Table 33 indicates the intersection geometric improvements by scenario for the project. GRTA Technical Guidelines do not allow for the consideration of simple timing changes to be used as mitigation, but phase changes may be considered. All required improvements are to be geometric in nature; however, it might be possible in some locations to improve the intersection to LOS D or E with simple adjustments to signal timing. A discussion on the geometric improvements is provided below.

From Table 32, it is seen that several roadway segments will experience inadequate LOS in future years. No roadway segment is expected to need to be improved more than once (i.e. a segment is 1 lane in Existing Conditions but is expected to be required to be 3 lanes in 2035 Background Conditions or 2035 Build Phase 2 conditions). The presence, or lack thereof, of the proposed I-75 northbound only interchange will affect the necessary Number of Lanes for segments on SR 138/Lake Spivey Parkway between I-75 northbound ramps and Davidson Parkway. The presence of the I-75 northbound only interchange would be expected to take some of reassigned traffic that would otherwise likely utilize SR 138/Lake Spivey Parkway to access I-75 northbound.

From Figures 8, 15, and 16 and Table 33, it is seen that some intersections, including, but not limited to, SR 138/Stockbridge Road at SR 42-138/US 23/N Henry Boulevard and Walmart Driveway, SR 138/Stockbridge Road at Davidson Parkway, and SR 138/Lake Spivey Parkway at I-675 southbound ramps, are expected to require significant geometric improvements that involve widening the existing roadway system to three or four lanes in at least one direction. Some of these improvements may not be geometrically feasible given right-of-way constraints or other considerations that would inhibit the required improvements greatly. DRI procedure is to show what is needed to meet the LOS standard established in Existing Conditions; however, given the excessive nature of some of the required improvements, coordination between the developer and local jurisdiction(s) to establish reasonable and agreed-upon improvements is strongly recommended.

If the proposed I-75 northbound only interchange is installed, all intersections expected to be affected by the presence, or lack thereof, of the proposed I-75 northbound only interchange would be expected to require the same or fewer improvements with the proposed I-75 northbound only interchange than without the proposed I-75 northbound only interchange. The only exception would be expected to be the intersection of Walt Stephens Road and the proposed Reeves Creek Parkway/I-75 northbound only ramps.

Table 32: Study Segment Number of Lanes by Scenario

#	Segment	From	To	Existing 2019		Background 2029		Background 2035		Build Phase 1 2029		Build Phase 2 2035		Build Phase 1 2029 NB Interchange		Build Phase 2 2035 NB Interchange	
				NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
1	Flippen Rd	Banks Rd	Walt Stephens Rd/Red Oak Rd	1	1	1	1	2	1	1	1	2	2	1	1	2	1
2	Flippen Rd	Walt Stephens Rd/Red Oak Rd	SR 42-138/US 23/N Henry Blvd	1	1	1	2	1	2	1	2	2	2	1	2	2	2
3	Banks Rd	Flippen Rd	Rock Quarry Rd	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Rock Quarry Rd	Banks Rd	SR 42-138/US 23/N Henry Blvd	1	1	2	2	2	2	2	2	2	2	2	2	2	2
5	SR 42/US 23/ N Henry Blvd	SR 138/Stockbridge Rd	Valley Hill Rd	1	1	2	2	2	2	2	2	2	2	2	2	2	2
6	SR 42-138/US 23/N Henry Blvd	SR 138/Stockbridge Rd	Flippen Rd	2	2	3	2	3	2	3	2	3	3	3	2	3	2
7	SR 42-138/US 23/N Henry Blvd	Flippen Rd	Harrel Dr/E Atlanta Rd	2	2	2	2	2	2	2	2	3	2	2	2	2	2
8	SR 42-138/US 23/N Henry Blvd	Harrel Dr/E Atlanta Rd	S Lee St	2	2	3	2	3	2	3	2	3	2	3	2	3	2
9	SR 42-138/US 23/N Henry Blvd	S Lee St	Rock Quarry Rd	2	2	2	2	3	2	2	2	3	2	2	2	3	2
10	SR 42-138/US 23/N Henry Blvd	Rock Quarry Rd	SR 42/US 23/N Henry Blvd	2	2	2	2	3	2	2	2	3	2	2	2	3	2
11	SR 138/Stockbridge Rd	Walter Way	SR 42/US 23/N Henry Blvd	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	SR 138/Stockbridge Rd	Daniel Dr	Walter Way	2	2	2	2	3	2	2	2	3	2	2	2	3	2
13	SR 138/Stockbridge Rd	Davidson Pkwy	Daniel Dr	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	SR 138/Lake Spivey Pkwy	I-675 NB	Davidson Pkwy	2	2	3	2	3	2	3	3	3	3	3	2	3	3
15	SR 138/Lake Spivey Pkwy	I-675 SB	I-675 NB	2	2	3	2	3	2	3	2	3	3	3	2	3	2
16	SR 138/Lake Spivey Pkwy	Hannover Pkwy	I-675 SB	2	2	2	2	2	2	2	2	3	3	2	2	2	2
17	SR 138/Lake Spivey Pkwy	Mt Zion Rd	Hannover Pkwy	2	2	2	2	2	2	2	2	3	3	2	2	2	2
18	SR 138/Lake Spivey Pkwy	I-75 NB	Mt Zion Rd	2	2	2	2	2	2	2	3	3	3	2	2	2	3
19	SR 138/Lake Spivey Pkwy	I-75 SB	I-75 NB	2	2	2	2	3	2	3	2	3	2	2	2	3	2
20	SR 138/Lake Spivey Pkwy	Speer Rd/Mt Zion Pkwy	I-75 SB	2	2	2	2	2	3	2	2	3	3	2	2	2	3
21	SR 138/Lake Spivey Pkwy	Spivey Rd	Speer Rd/Mt Zion Pkwy	2	2	2	2	2	2	2	2	2	2	2	2	2	2
22	Davidson Pkwy	SR 138/Stockbridge Rd	SR 42-138/US 23/N Henry Blvd	1	1	1	1	1	1	-	-	-	-	-	-	-	-
22A	Davidson Pkwy	SR 138/Stockbridge Rd	*proposed* Reeves Creek Pkwy	-	-	-	-	-	-	2	2	2	2	2	2	2	2
22B	Davidson Pkwy	*proposed* Reeves Creek Pkwy	SR 42-138/US 23/N Henry Blvd	-	-	-	-	-	-	1	1	2	1	1	1	2	1
23	Speer Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	1	1	2	2	2	2	2	2	2	2	2	2	2	2
24	Spivey Rd	Walt Stephens Rd	SR 138/Lake Spivey Pkwy	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	Red Oak Rd	Flippen Rd	Rock Quarry Rd	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Walt Stephens Rd	Flippen Rd	Brentwood Pkwy/Monarch Village Way	1	1	2	1	2	2	-	-	-	-	-	-	-	-
26A	Walt Stephens Rd	Flippen Rd	*proposed* Reeves Creek Pkwy	-	-	-	-	-	-	2	2	2	2	2	2	2	2
26B	Walt Stephens Rd	*proposed* Reeves Creek Pkwy	Brentwood Pkwy/Monarch Village Way	-	-	-	-	-	-	2	2	2	2	2	2	2	2
27	Walt Stephens Rd	Speer Rd/Blackhall Rd	Brentwood Pkwy/Monarch Village Way	1	1	1	2	1	2	1	2	1	2	1	2	1	2
28	Walt Stephens Rd	Spivey Rd	Speer Rd/Blackhall Rd	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Table 33: Intersection Lane Geometry by Scenario

Intersection	Existing 2019 Traffic Control	Existing 2019 Lane Geometry	Proposed Background 2029 Lane Geometry	Proposed Background 2035 Lane Geometry	Proposed Build Phase 1 2029 Lane Geometry	Proposed Build Phase 2 2035 Lane Geometry	Proposed Build Phase 1 2029 NB Interchange Lane Geometry	Proposed Build Phase 2 2035 NB Interchange Lane Geometry
SR 138 @ SR 42/US 23/N Henry Blvd	Traffic Signal	1 NBL, 1 NBR 2 EBT, 1 EBR 1 WBL, 2 WBT	2 NBL, 2 NBR 2 EBT, 1 EBR 1 WBL, 2 WBT	2 NBL, 2 NBR 2 EBT, 2 EBR 2 WBL, 2 WBT	2 NBL, 2 NBR 2 EBT, 1 EBR 2 WBL, 2 WBT	2 NBL, 2 NBR 2 EBT, 2 EBR 2 WBL, 2 WBT	-	
SR 42-138/US 23/N Henry Blvd @ Rock Quarry Rd	Traffic Signal	1 NBL, 1 NBR 2 EBT, 1 EBR 1 WBL, 2 WBT		2 NBL, 2 NBR 2 EBT, 1 EBR 1 WBL, 2 WBT	1 NBL, 2 NBR 2 EBT, 1 EBR 1 WBL, 2 WBT	2 NBL, 2 NBR 3 EBT, 1 EBR 2 WBL, 2 WBT	-	
SR 42-138/US 23/N Henry Blvd @ S Lee St	Traffic Signal	1 NBL, 1 NBR 1 EBT, 1 EBT+R 1 WBL, 2 WBT						
SR 42-138/US 23/N Henry Blvd @ E Atlanta Rd/Harrel Dr	Traffic Signal	1 NBL+T+R 1 SBL+T+R 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 1 WBT, 1 WBT+R	1 NBL+T+R 1 SBL, 1 SBT+R, 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR	1 NBL, 1 NBT+R 2 SBL, 1 SBT+R 2 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR	1 NBL+T+R 2 SBL, 1 SBT, 1 SBR 2 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR	1 NBL+T+R 2 SBL, 1 SBT, 1 SBR 2 EBL, 2 EBT, 1 EBR 1 WBL, 3 WBT, 1 WBR	-	
SR 42-138/US 23/N Henry Blvd @ Flippen Rd/Shields Rd	Traffic Signal	1 NBL+T, 1 NBR 1 SBL+T+R 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 1 WBT, 1 WBT+R	1 NBL, 1 NBT, 1 NBR 1 SBL+T+R 1 EBL, 2 EBT, 1 EBR 1 WBL, 1 WBT, 1 WBT+R			1 NBL, 1 NBT, 2 NBR 1 SBL+T+R 1 EBL, 3 EBT, 1 EBR 2 WBL, 2 WBT, 1 WBT+R	-	
SR 42-138/US 23/N Henry Blvd @ Davidson Pkwy	Side Street Stop Control	1 NBL, 2 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBT+R 1 EBL+T+R 1 WBL+T+R	1 NBL, 2 NBT, 1 NBR 1 SBL, 2 SBT, 1 SBR 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR					
SR 42-138/US 23/N Henry Blvd @ SR 138/Stockbridge Rd/ Walmart	Traffic Signal	2 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBT+R 1 EBL+T, 2 EBR 1 WBL, 1 WBT, 1 WBR	2 NBL, [2 NBT], 1 NBR 1 SBL, 2 SBT, [1 SBR] [1 EBL], 1 EBT, 2 EBR 1 WBL, 1 WBT, 1 WBR Protected-permissive side street left turn phases	2 NBL, 2 NBT, 1 NBR 1 SBL, 3 SBT, 1 SBR 1 EBL, 2 EBT, 2 EBR 1 WBL, 1 WBT, 1 WBR Protected-permissive side street left turn phases	2 NBL, [2 NBT], 1 NBR 1 SBL, 2 SBT, [1 SBR] [1 EBL], 1 EBT, 2 EBR 1 WBL, 1 WBT, 1 WBR Protected-permissive side street left turn phases	2 NBL, 2 NBT, 1 NBR 1 SBL, 3 SBT, 1 SBR 1 EBL, 2 EBT, 2 EBR 1 WBL, 1 WBT, 1 WBR Protected-permissive side street left turn phases	-	
SR 42/US 23/N Henry Blvd @ Valley Hill Rd	Traffic Signal	1 NBT, 1 NBR 1 SBL, 1 SBT 1 WBL, 1 WBR	[2 NBT], 1 NBR 1 SBL, [2 SBT] 1 WBL, 1 WBR					
SR 138/Stockbridge Rd @ Walter Way	Traffic Signal	1 NBL+T, 1 NBR 1 SBL, 1 SBT+R 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR				1 NBL+T, 1 NBR 1 SBL, 1 SBT+R 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	-	
SR 138/Stockbridge Rd @ Daniel Dr	Traffic Signal	1 NBL+T+R 1 SBL+T, 1 SBR 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR						
SR 138/Stockbridge Rd @ Davidson Pkwy	Traffic Signal	1 NBL, 1 NBL+T+R 1 SBL+T, 1 SBR 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	1 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR Permissive only side street phasing 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	1 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR Pemissive only side street phasing 1 EBL, 3 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	4 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 4 EBT, 1 EBR 1 WBL, 4 WBT, 1 WBR	6 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 5 EBT, 1 EBR 1 WBL, 5 WBT, 1 WBR	3 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR 1 EBL, 3 EBT, 1 EBR 1 WBL, 3 WBT, 1 WBR	4 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR 1 EBL, 3 EBT, 1 EBR 1 WBL, 3 WBT, 1 WBR
SR 138/Lake Spivey Pkwy @ I-675 NB	Traffic Signal	1 NBL, 1 NBR 1 EBL, 2 EBT 2 WBT, 1 WBR		1 NBL, 2 NBR 2 EBL, 3 EBT 2 WBT, 1 WBR	1 NBL, 2 NBR 2 EBL, 3 EBT 2 WBT, 1 WBR	1 NBL, 2 NBR 2 EBL, 3 EBT 3 WBT, 1 WBR	1 NBL, 2 NBR 1 EBL, 3 EBT 2 WBT, 1 WBR	1 NBL, 2 NBR 1 EBL, 3 EBT 3 WBT, 1 WBR
SR 138/Lake Spivey Pkwy @ I-675 SB	Traffic Signal	2 SBL, 2 SBR 1 EBT, 1 EBT+R 1 WBL, 2 WBT	2 SBL, 2 SBR 3 EBT, 1 EBR 1 WBL, 2 WBT			3 SBL, 2 SBR 4 EBT, 1 EBR 2 WBL, 3 WBT	2 SBL, 2 SBR 3 EBT, 1 EBR 1 WBL, 2 WBT	3 SBL, 2 SBR 4 EBT, 1 EBR 2 WBL, 2 WBT
SR 138/Lake Spivey Pkwy @ Hannover Pkwy	Traffic Signal	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR				1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 3 EBT, 1 EBR 1 WBL, 3 WBT, 1 WBR	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	
SR 138/Lake Spivey Pkwy @ Mt Zion Rd	Traffic Signal	1 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR			1 NBL, 1 NBT+R 2 SBL, 1 SBT, 1 SBR 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	1 NBL, 1 NBT+R 2 SBL, 1 SBT, 1 SBR 1 EBL, 3 EBT, 1 EBR 1 WBL, 3 WBT, 1 WBR	1 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR 1 EBL, 2 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR	1 NBL, 1 NBT+R 2 SBL, 1 SBT, 1 SBR 1 EBL, 3 EBT, 1 EBR 1 WBL, 2 WBT, 1 WBR
SR 138/Lake Spivey Pkwy @ I-75 NB	Traffic Signal	1 NBL, 1 NBR 1 EBL, 2 EBT 2 WBT, 1 WBR	2 NBL, 1 NBR 1 EBL, 2 EBT 2 WBT, 1 WBR	2 NBL, 1 NBR 2 EBL, 2 EBT 2 WBT, 2 WBR	2 NBL, 1 NBR 1 EBL, 2 EBT 2 WBT, 1 WBR	2 NBL, 1 NBR 2 EBL, 2 EBT 2 WBT, 2 WBR	2 NBL, 1 NBR 1 EBL, 2 EBT 2 WBT, 1 WBR	2 NBL, 1 NBR 1 EBL, 2 EBT 3 WBT, 1 WBR
SR 138/Lake Spivey Pkwy @ I-75 SB	Traffic Signal	2 SBL, 2 SBR 2 EBT, 1 EBR 1 WBL, 2 WBT	2 SBL, 2 SBR 2 EBT, 1 EBR 1 WBL, 2 WBT			3 SBL, 2 SBR 2 EBT, 1 EBR 1 WBL, 2 WBT	-	
SR 138/Lake Spivey Pkwy @ Speer Rd/Mt Zion Pkwy	Traffic Signal	2 NBL, 2 NBT, 1 NBR 2 SBL, 2 SBT, 1 SBR 2 EBL, 2 EBT, 1 EBR 2 WBL, 2 WBT, 1 WBR	2 NBL, 2 NBT, 2 NBR 2 SBL, 2 SBT, 1 SBR 2 EBL, 2 EBT, 1 EBR 2 WBL, 2 WBT, 1 WBR	2 NBL, 2 NBT, 2 NBR 2 SBL, 2 SBT, 1 SBR 2 EBL, 3 EBT, 1 EBR 2 WBL, 3 WBT, 1 WBR	2 NBL, 2 NBT, 2 NBR 2 SBL, 2 SBT, 1 SBR 2 EBL, 2 EBT, 1 EBR 2 WBL, 2 WBT, 1 WBR	2 NBL, 2 NBT, 2 NBR 2 SBL, 2 SBT, 1 SBR 2 EBL, 3 EBT, 1 EBR 2 WBL, 3 WBT, 1 WBR	-	
SR 138/Lake Spivey Pkwy @ Spivey Rd	Traffic Signal	1 NBL, 1 NBR 1 EBU, 2 EBT, 1 EBR 1 WBL, 2 WBT						
Walt Stephens Rd @ Spivey Rd	Side Street Stop Control	1 SBL+R 1 EBL+T 1 WBT+R	1 SBL, 1 SBR 1 EBL, 1 EBT 1 WBT, 1 WBR					
Walt Stephens Rd @ Speer Rd/Blackhall Rd	Traffic Signal	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT, 1 WBR	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT, 2 WBR			1 NBL, 1 NBT, 1 NBR 2 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT, 2 WBR	-	
Walt Stephens Rd @ Monarch Village Way/ Brentwood Pkwy	Traffic Signal	1 NBL+T, 1 NBR 1 SBL+T, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT, 1 WBR						
Flippen Rd @ Walt Stephens Rd/ Red Oak Rd	Traffic Signal	1 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT+R	1 NBL, 1 NBT+R 1 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR (free-flow add lane) 1 WBL, 1 WBT+R			2 NBL, 1 NBT, 1 NBT+R 1 SBL, 2 SBT, 2 SBR 2 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT+R	-	
Flippen Rd @ Banks Rd/Village Way	Traffic Signal	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL+T+R 1 WBL+T, 1 WBR						
Banks Rd @ Tye St	Side Street Stop Control	1 SBL+R 1 EBL+T 1 WBT+R						
Rock Quarry Rd @ Banks Rd/Carrington Ridge	Traffic Signal	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT+R 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR	1 NBL, 1 NBT, [1 NBT+R] 1 SBL, [1 SBT], 1 SBT+R 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR					
Rock Quarry Rd @ Red Oak Rd/Red Oak Village	Side Street Stop Control	1 NBL+T, 1 NBR 1 SBL+T, 1 SBR 1 EBL+T+R 1 WBL+T+R	[1 NBL], [1 NBT], 1 NBR [1 SBL], [1 SBT], 1 SBR [1 EBR] [1 WBR]					
Red Oak Rd @ Tye St	All-Way Stop Control	1 NB L+T+R 1 SB L+T+R 1 EBL+T+R 1 WB L+T+R						
Davidson Pkwy @ Walter Way	All-Way Stop Control	1 NBL+T+R 1 SBL+T+R 1 EBL, 1 EBT+R 1 WBL, 1 WBT+R				1 NBL+T+R 1 SBL+T, 1 SBR 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 1 WBT, 1 WBT+R	-	
Flippen Rd @ Fairhaven Rd	Side Street Stop Control	1 NBT, 1 NBR 1 SBL+T 1 WBL+R	1 NBT, 1 NBR 1 SBL+T 1 WBL, 1 WBR		1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR	-	
Davidson Pkwy @ *proposed* Reeves Creek Pkwy	Traffic Signal (warranted & proposed)	-			1 NBL, 1 NBT, 1 NBR 2 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT+R 1 WBL+T, 1 WBR	1 NBL, 2 NBT, 1 NBR 2 SBL, 2 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT, 1 WBR	1 NBL, 1 NBT, 1 NBR 1 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT+R 1 WBL+T, 1 WBR	1 NBL, 1 NBT, 1 NBR 2 SBL, 1 SBT, 1 SBR 1 EBL, 1 EBT, 1 EBR 1 WBL, 1 WBT, 1 WBR
Walt Stephens Rd @ *proposed* Reeves Creek Pkwy	Traffic Signal (warranted & proposed)	-			1 SBL, 1 SBR 1 EBL, 1 EBT 1 WBT, 1 WBR	1 SBL, 1 SBR 1 EBL, 1 EBT 1 WBT, 1 WBR	1 SBL, 1 SBT, 1 SBR 1 NBL+T, 1 NBR 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR	1 SBL, 1 SBT, 1 SBR 1 NBL+T, 1 NBR 1 EBL, 1 EBT, 1 EBT+R 1 WBL, 2 WBT, 1 WBR
Flippen Rd @ Driveway 4/Driveway 5	Side Street Stop Control (proposed)	-			1 NBL, 1 NBT, 1 NBR 1 SBL+T, 1 SBR 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR	1 NBL, 1 NBT, 1 NBR 1 SBL+T, 1 SBR 1 EBL+T, 1 EBR 1 WBL+T, 1 WBR	-	

2029 [Programmed] Background Improvements

2035 Background Improvements

2029 Build Phase 1 Improvements

2035 Build Phase 2 Improvements

SR 138 at SR 42/US 23/N Henry Blvd

- The intersection operates at LOS C during the AM peak hour and LOS E during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during the AM peak hour and LOS E in the PM peak hour.
- For Background 2029 Conditions, the additions of 1 NBL lane and 1 NBR lane are needed to meet the established LOS standard.
- For Background 2035 Conditions, the additions of 1 EBR lane and 1 WBL lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions, the addition of 1 WBL lane is needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, no further improvements are needed to meet the established LOS standard.

SR 42-138/US 23/N Henry Blvd at Rock Quarry Rd

- The intersection operates at LOS C during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Background 2035 Conditions, the additions of 1 NBL lane and 1 NBR lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions, the addition of 1 NBR lane is needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the additions of 1 EBT lane and 1 WBL lane are needed to meet the established LOS standard.

SR 42-138/US 23/N Henry Blvd at S Lee St

- The intersection operates at LOS A during both peak hours in Existing Conditions and is expected to operate at LOS A during both peak hours in Background and Build scenarios; therefore, no further improvements are needed to meet the established LOS standard.

SR 42-138/US 23/N Henry Blvd at E Atlanta Rd/Harrel Dr

- The intersection operates at LOS D during the AM peak hour and LOS C during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, the additions of 1 SBL lane and 1 WBR lane are needed to meet the established LOS standard.
- For Background 2035 Conditions, the additions of 1 NBL lane, 1 SBL lane, and 1 EBL lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions, the additions of 1 SBL lane, 1 SBR lane, and 1 EBL lane are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the additions of 1 SBR lane, 1 EBR lane, and 1 WBT lane are needed to meet the established LOS standard.

SR 42-138/US 23/N Henry Blvd at Flippen Rd/Shields Rd

- The intersection operates at LOS C during the AM peak hour and LOS E during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during the AM peak hour and LOS E during the PM peak hour.

- For Background 2029 Conditions, the additions of 1 NBL lane and 1 EBR lane are needed to meet the established LOS standard.
- For Background 2035 Conditions and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the additions of 1 NBR lane, 1 EBT lane, 1 WBT lane, and 1 WBL lane are needed to meet the established LOS standard.

SR 42-138/US 23/N Henry Blvd at Davidson Pkwy

- The intersection is side street stop-controlled, so the LOS is measured by the side street(s) approach and mainline left turn delays. The eastbound and westbound side street approaches operate at LOS F during both peak hours. The northbound and southbound mainline left turns operate at LOS A and B, respectively, for the AM peak hour and LOS C and B, respectively, for the PM peak hour. The LOS standard for Background and Build conditions is LOS E for the side street approaches during both peak hours and LOS D for both mainline left turns during both peak hours.
- Improvements are needed in Existing Conditions. These improvements were utilized in the Background and Build scenarios, but due to the increasing volume entering the intersection with a mere side street stop control, delays continue to worsen significantly into the Background and Build scenarios. The additions of 1 SBR lane, 1 EBR lane, and 1 WBR lane were implemented to attempt to meet the established LOS standard.
- GRTA DRI policy states that improvements must be made until LOS standard is met. However, due to the nature of this unsignalized intersection, the LOS standard cannot be met. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

SR 42-138/US 23/N Henry Blvd at SR 138/Stockbridge Rd/Walmart Dwy

- The intersection operates at LOS D during the AM peak hour and LOS F during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during the AM peak hour and LOS E during the PM peak hour.
- For Background 2029 Conditions, the programmed improvements via GDOT P.I. No. 322050 of 1 NBT lane, 1 SBR lane, and 1 EBL lane are needed to meet the established LOS standard. Protected+permissive left turn phases were added for each side street approach.
- For Background 2035 Conditions, the additions of 1 EBT lane and 1 SBT lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions and Build Phase 2 2035 Conditions, no further improvements are needed to meet the established LOS standard.

SR 42/US 23/N Henry Blvd at Valley Hill Rd

- The intersection operates at LOS C during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- Programmed improvements from GDOT P.I. No. 322050 will provide 1 NBT lane and 1 SBT lane at the intersection.
- With GDOT's programmed improvements at the intersection, no further improvements are needed to meet the established LOS standard in Background and Build conditions.

SR 138/Stockbridge Rd at Walter Way

- The intersection operates at LOS A during the AM peak hour and LOS C during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, Background 2035 Conditions, and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the addition of 1 EBR lane is needed to meet the established LOS standard.

SR 138/Stockbridge Rd at Daniel Dr

- The intersection operates at LOS A during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- No further improvements are needed to meet the established LOS standard.

SR 138/Stockbridge Rd at Davidson Pkwy

- The intersection operates at LOS B during the AM peak hour and LOS D during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, 1 NBL lane, 1 NBT+R lane and the addition of 1 SBL lane are needed to meet the established LOS standard. Side street phasing changed to permissive only.
- For Background 2035 Conditions, the addition of 1 EBT lane is needed to meet the established LOS standard; however, the delay is 56.9 seconds, which is only 1.9 seconds beyond LOS D.
- For Build Phase 1 2029 Conditions, the additions of 3 NBL lanes, 1 NBR lane, 2 EBT lanes, and 2 WBT lanes are needed to meet the established LOS standard. The glut of necessary lane improvements at this intersection is due primarily to the anticipated number of northbound left turn volume expected from the project traffic. With no I-75 northbound-only interchange, most of the project traffic is expected to gravitate to this intersection to access I-675 and I-75.
- For Build Phase 2 2035 Conditions, the additions of 5 NBL lanes, 1 NBR lane, 2 EBT lanes, and 3 WBT lanes are needed to meet the established LOS standard. The glut of necessary lane improvements at this intersection is due primarily to the anticipated number of northbound left turn volume expected from the project traffic. With no I-75 northbound-only interchange, most of the project traffic is expected to gravitate to this intersection to access I-675 and I-75.
- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the additions of 2 NBL lanes, 1 EBT lane, and 1 WBT lane are needed to meet the established LOS standard. The necessary improvements to meet the LOS standard are less significant than those without the I-75 northbound-only interchange.
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the additions of 3 NBL lanes and 1 WBT lane are needed to meet the established LOS standard. The necessary improvements to meet the LOS standard are less significant than those without the I-75 northbound-only interchange.

SR 138/Lake Spivey Pkwy at I-675 NB

- The intersection operates at LOS C during the AM peak hour and LOS B during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, no further improvements are needed to meet the established LOS standard.

- For Background 2035 Conditions, the additions of 1 NBR lane, 1 EBL lane, and 1 EBT lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions, the additions of 1 NBR lane, 1 EBL lane, and 1 EBT lane are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the addition of 1 WBT lane is needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the additions of 1 NBR lane and 1 EBT lane are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the addition of 1 WBT lane is needed to meet the established LOS standard.

SR 138/Lake Spivey Pkwy at I-675 SB

- The intersection operates at LOS C during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, the additions of 1 EBT lane and 1 EBR lane are needed to meet the established LOS standard.
- For Background 2035 Conditions and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the additions of 1 SBL lane, 1 EBT lane, 1 WBT lane, and 1 WBL lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the additions of 1 SBL lane, 1 EBT lane, and 1 WBL lane are needed to meet the LOS standard.

SR 138/Lake Spivey Pkwy at Hannover Pkwy

- The intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, Background 2035 Conditions, and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 3035 Conditions, the addition of 1 EBT lane or 1 WBT lane is needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions and Build Phase 2 2035 Conditions with I-75 northbound-only interchange, no further improvements are needed to meet the established LOS standard.

SR 138/Lake Spivey Pkwy at Mt Zion Rd

- The intersection operates at LOS B during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions and Background 2035 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions, the addition of 1 SBL lane is needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the additions of 1 SBL lane, 1 EBT lane, and 1 WBT lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, no further improvements are needed to meet the established LOS standard.

- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the additions of 1 SBL lane and 1 EBT or 1 WBT lane are needed to meet the established LOS standard.

SR 138/Lake Spivey Pkwy at I-75 NB

- The intersection operates at LOS C during the AM peak hour and LOS A during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, the addition of 1 NBL lane is needed to meet the established LOS standard.
- For Background 2035 Conditions, the additions of 1 EBL lane and 1 WBR lane are needed to meet the established LOS standard.
- For Build Phase 1 2029 Conditions, Build Phase 2 2035 Conditions, and Build Phase 1 2029 Conditions with I-75 northbound-only interchange, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the addition of 1 WBT lane is needed to meet the established LOS standard.

SR 138/Lake Spivey Pkwy at I-75 SB

- The intersection operates at LOS B during the AM peak hour and LOS D during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, the addition of 1 SBR lane is needed to meet the established LOS standard.
- For Background 2035 Conditions and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the addition of 1 SBL lane is needed to meet the established LOS standard.

SR 138/Lake Spivey Pkwy at Speer Rd/Mt Zion Pkwy

- The intersection operates at LOS D during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, the addition of 1 NBR lane is needed to meet the established LOS standard.
- For Background 2035 Conditions, the additions of 1 EBT lane and 1 WBT lane are needed to meet the established LOS standard; however, the delay is 63.3 seconds, which is only 8.3 seconds beyond LOS D.
- For Build Phase 1 2029 Conditions and Build Phase 2 2035 Conditions, no further improvements are needed to meet the established LOS standard.

SR 138/Lake Spivey Pkwy at Spivey Rd

- The intersection operates at LOS B during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- No further improvements are needed to meet the established LOS standard.

Walt Stephens Rd at Spivey Rd

- The southbound left turn movement operates at LOS F during the AM peak hour and LOS C during the PM peak hour in Existing Conditions. The eastbound mainline left turn movement operates at LOS B during the AM peak hour and LOS A during the PM peak hour in Existing Conditions.
- The intersection is side street stop-controlled, so the LOS is measured by the side street(s) approach and mainline left turn delays.
- Improvements are needed in Existing Conditions. These improvements were utilized in the Background and Build scenarios, but due to the increasing volume entering the intersection with a mere side street stop control, delays continue to worsen significantly into the Background and Build scenarios. The additions of 1 SBR lane, 1 EBL lane, and 1 WBR lane were implemented to attempt to meet the established LOS standard.
- GRTA DRI policy states that improvements must be made until LOS standard is met. However, due to the nature of this unsignalized intersection, the LOS standard cannot be met. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Walt Stephens Rd at Speer Rd/Blackhall Rd

- The intersection operates at LOS C during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, the addition of 1 WBR lane is needed to meet the established LOS standard of D; however, the delay is 58.4 seconds, which is only 3.4 seconds beyond LOS D.
- For Background 2035 Conditions and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the addition of 1 SBL lane is needed to meet the established LOS standard; however, the delay is 60.8 seconds, which is only 5.8 seconds beyond LOS D.

Walt Stephens Rd at Brentwood Pkwy/Monarch Village Way

- The intersection operates at LOS C during the AM peak hour and LOS B during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, Background 2035 Conditions, and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the LOS in the AM peak hour worsens to LOS E. However, the delay is only 2.5 seconds beyond LOS D, so no further improvements were pursued to meet the established LOS standard.

Flippen Rd at Walt Stephens Rd/Red Oak Rd

- The intersection operates at LOS C during the AM peak hour and LOS F during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during the AM peak hour and LOS E during the PM peak hour.
- For Background 2029 Conditions, the addition of 1 EBR lane (free flow add onto Flippen Road) is needed to meet the established LOS standard.
- For Background 2035 Conditions and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions, the additions of 1 NBT lane, 1 NBL lane, 1 SBT lane, 1 SBR lane, and 1 EBL lane are needed to meet the established LOS standard.

- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the additions of 1 NBL lane, 1 SBR lane, and 1 EBL lane are needed to meet the established LOS standard.
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the additions of 1 NBT lane, 1 NBL lane, 1 SBT lane, 1 SBR lane, 1 EBL lane, and 1 WBR lane are needed to meet the established LOS standard.

Flippen Rd at Banks Rd/Village Way

- The intersection operates at LOS B during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- No further improvements are needed to meet the established LOS standard.

Banks Rd at Tye St

- The southbound left turn movement operates at LOS B during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- No further improvements are needed to meet the established LOS standard.

Rock Quarry Rd at Banks Rd/Carrington Ridge

- The intersection operates at LOS C during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- Programmed improvements from GDOT P.I. No. 322050 will provide 1 NBT lane and 1 SBT lane at the intersection.
- With GDOT's programmed improvements at the intersection, no further improvements are needed to meet the established LOS standard in Background and Build conditions.

Rock Quarry Rd at Red Oak Rd/Red Oak Village

- Except for the westbound approach during the AM peak hour, both side street approaches operate at LOS E or worse during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS E during both peak hours, except for the westbound approach during the AM peak hour. The LOS standard for the westbound approach during the AM peak hour is LOS D.
- Programmed improvements from GDOT P.I. No. 322050 will provide 1 NBT lane, 1 NBL lane, 1 SBT lane, and 1 SBL lane at the intersection and transform the intersection into an unsignalized Restricted Crossing U-Turn (RCUT) as part of the widening. The side street approaches will only be able to turn right and make a U-turn at a designated median opening. However, left turns from Rock Quarry Road will still be physically allowed.
- With GDOT's programmed improvements at the intersection, no further improvements are needed to meet the established LOS standard in Background and Build conditions.

Red Oak Rd at Tye St

- The intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- No further improvements are needed to meet the established LOS standard.

Davidson Pkwy at Walter Way

- The intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, Background 2035 Conditions, and Build Phase 1 2029 Conditions, no further improvements are needed to meet the established LOS standard in Background and Build conditions.
- For Build Phase 2 2035 Conditions, the additions of 1 SBR lane, 1 EBT lane, and 1 WBT lane are needed to meet the established LOS standard.
- While the preceding improvements help the intersection meet the established LOS standard, multi-lane approaches on all-way stop controlled intersections are typically not the norm. Other improvements may need to be considered at this location by Build Phase 2 2035 Conditions, such as a traffic signal control or an alternative intersection design, including but not limited to a Restricted Crossing U-Turn (RCUT), Right-In/Right-Out Only (RIRO), or Median U-Turn (MUT).

Flippen Rd at Fairhaven Rd

- The westbound side street approach operates at LOS C during both peak hours in Existing Conditions; therefore, the LOS standard for Background and Build conditions is LOS D during both peak hours.
- For Background 2029 Conditions, no further improvements are needed to meet the established LOS standard.
- For Background 2035 Conditions, the addition of 1 WBR lane is needed to meet the established LOS standard; however, the delay is 40.8 seconds, which is only 5.8 seconds beyond LOS D.
- For Build Phase 1 2029 Conditions and Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the west leg of the intersection will be added as proposed Fairhaven Road Extension, and the east leg of the intersection will have residential development added as part of the proposed development. Turn lanes are warranted at the intersection as follows:
    - Northbound left turn lane
    - Northbound right turn lane
    - Southbound left turn lane
    - Southbound right turn lane
    - While not recommended by the NCHRP Turn Lane Warrants, inadequate LOS on both the eastbound and westbound single-lane approaches prompted the addition of right turn lanes on both side street approaches.
    - GRTA DRI policy states that improvements must be made until LOS standard is met. However, due to the nature of this unsignalized intersection, the LOS standard cannot be met. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or alternative intersection.
- For Build Phase 2 2035 Conditions and Build Phase 2 2035 with I-75 northbound-only interchange, the same conditions from Build Phase 1 2029 and Build Phase 1 2029 with I-75 northbound-only interchange apply.

Davidson Pkwy at proposed Reeves Creek Pkwy

- Turn lanes are warranted at the intersection as follows:
    - Northbound left turn lane
    - Northbound right turn lane
    - Southbound left turn lane

    - Southbound right turn lane
    - Two-lane eastbound and westbound approaches
- Traffic Signal is warranted in Build Phase 1 2029 Conditions with the proposed I-75 northbound-only interchange, which is the scenario that is expected to produce the lesser amount of traffic at this intersection.
- For Build Phase 1 2029 Conditions, the intersection is expected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour with the following lane configurations:
    - 1 NBL, 1 NBT, 1 NBR
    - 2 SBL, 2 SBT, 2 SBR
    - 1 EBL, 1 EBT+R
    - 1 WBL+T, 1 WBR
- For Build Phase 2 2035 Conditions, the intersection is expected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour with the following lane configurations:
    - 1 NBL, 2 NBT, 1 NBR
    - 2 SBL, 2 SBT, 1 SBR
    - 1 EBL, 1 EBT, 1 EBR
    - 1 WBL, 1 WBT, 1 WBR
- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the intersection is expected to operate at LOS C during both peak hours with the following lane configurations:
    - 1 NBL, 1 NBT, 1 NBR
    - 1 SBL, 1 SBT, 1 SBR
    - 1 EBL, 1 EBT+R
    - 1 WBL+T, 1 WBR
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the intersection is expected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour with the following lane configurations:
    - 1 NBL, 1 NBT, 1 NBR
    - 2 SBL, 1 SBT, 1 SBR
    - 1 EBL, 1 EBT, 1 EBR
    - 1 WBL, 1 WBT, 1 WBR

Walt Stephens Rd at proposed Reeves Creek Pkwy/I-75 NB

- The traffic signal warrant and turn lane warrants were performed in the absence of the proposed I-75 northbound-only interchange.
- Turn lanes are warranted at the intersection as follows:
    - Eastbound left turn lane
    - Westbound right turn lane
    - Two-lane southbound approach
- Traffic Signal is warranted in Build Phase 1 2029 Conditions without the proposed I-75 northbound-only interchange, which is the scenario that is expected to produce the lesser amount of traffic at this intersection.
- For Build Phase 1 2029 Conditions, the intersection is expected to operate at LOS B during the AM peak hour and LOS C during the PM peak hour with the following lane configurations:
    - 1 SBL, 1 SBR
    - 1 EBL, 1 EBT
    - 1 WBT, 1 WBR

- For Build Phase 2 2035 Conditions, the intersection is expected to operate at LOS A during the AM peak hour and LOS D during the PM peak hour with the following lane configurations:
    - 1 SBL, 1 SBR
    - 1 EBL (protected+permissive phase added), 1 EBT
    - 1 WBT, 1 WBR
- For Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the intersection is expected to operate at LOS C during both peak hours with the following lane configurations:
    - 1 NBL+T lane, 1 NBR lane
    - 1 SBL lane, 1 SBT lane, 1 SBR lane
    - 1 EBL lane (protected+permissive phase added), 1 EBT lane, 1 EBT+R lane
    - 1 WBL lane, 2 WBT lanes, 1 WBR lane
- For Build Phase 2 2035 Conditions with I-75 northbound-only interchange, the intersection is expected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour with the same lane configurations as those in Build Phase 1 2029 Conditions with I-75 northbound-only interchange.

Flippen Rd at Site Driveways 4 and 5

- For Build Phase 1 2029 Conditions and Build Phase 1 2029 Conditions with I-75 northbound-only interchange, the east and west legs of the intersection will have residential development added as part of the proposed development. Turn lanes are warranted at the intersection as follows:
    - Northbound left turn lane
    - Northbound right turn lane
    - Southbound right turn lane
    - While not recommended by the NCHRP Turn Lane Warrants, inadequate LOS on both the eastbound and westbound single-lane approaches prompted the addition of right turn lanes on both side street approaches.
    - GRTA DRI policy states that improvements must be made until LOS standard is met. However, due to the nature of this unsignalized intersection, the LOS standard cannot be met. Other improvements would need to be considered at this location to improve the LOS further, such as a traffic signal control or alternative intersection.
- For Build Phase 2 2035 Conditions and Build Phase 2 2035 with I-75 northbound-only interchange, the same conditions from Build Phase 1 2029 and Build Phase 1 2029 with I-75 northbound-only interchange apply.

APPENDIX A: Site Plan

I:\2018\2018196\0 Preliminary\2018196 DRI.dwg, PREVIOUS PAPER SIZE (30.00 X 42.00 INCHES), SCRAM PMLTBL.DWG TO PDF.PC3, JOHN WISE, August 21, 2019 1:55:55 PM

SITE & LAND ANALYSIS - COMMERCIAL

RESTAURANTS & HOTELS (SR 138)	±18.3 ACRES
3 HOTELS (4–STORY, 100+ ROOMS)	±160,000 S.F.
RETAIL SHOPS	±15,000 S.F.
3 RESTAURANT OUTLOTS	±15,000 S.F.
PARKING ALLOWED	500 SPACES (1 SP/ROOM & 1 SP/150 S.F.)
FLOOR AREA RATIO	±0.24
MEDICAL OFFICE PARK	±29.1 ACRES
14 OFFICE BLDGS.	±250,000 S.F.
PARKING ALLOWED	150 SPACES (5 SP/PHYSICIAN)
FLOOR AREA RATIO	±0.20
RETAIL POWER CENTER	±33.4 ACRES
CLUB WAREHOUSE	±135,000 S.F.
PARKING ALLOWED	900 SPACES (1 SP/150 S.F.)
HOME IMPROVEMENT WAREHOUSE	±100,000 S.F.
PARKING ALLOWED	250 SPACES (1 SP/400 S.F.)
RETAIL ANCHOR/SHOPS	±75,000 S.F.
TOTAL BLDG. AREA	±310,000 S.F.
PARKING ALLOWED	2,067 SPACES (1 SP/150 S.F.)
FLOOR AREA RATIO	±0.22
RESTAURANTS & RETAIL (PARKWAY)	±35.7 ACRES
OFFICE & FLEX SPACE PARK	±18.5 ACRES
OFFICE & FLEX SPACE	±150,000 S.F.
4 2–STORY OFFICES	±120,000 S.F.
PARKING ALLOWED	900 SPACES (1 SP/300 S.F.)
FLOOR AREA RATIO	±0.33

SITE & LAND ANALYSIS - COMMERCIAL

MASS TRANSIT COMPLEX	±16.8 ACRES
MASS TRANSIT STATION	±40,000 S.F.
PARKING ALLOWED	33 SPACES (1 SP/3 SEATS IN WAITING AREA)
INNOVATION CENTER	±50,000 S.F.
2 HOTELS (4–STORY, 100+ ROOMS)	±80,000 S.F.
RESTAURANT/RETAIL/LOFTS	±75,000 S.F.
PARKING ALLOWED	1,158 SPACES (1 SP/150 S.F. / 1 SP/400 S.F.)
FLOOR AREA RATIO	±0.33
OFFICE TOWERS	±4.7 ACRES
BUILDING #1 (10–STORY)	±200,000 S.F.
BUILDING #2 (10–STORY)	±200,000 S.F.
TOTAL BLDG. AREA	±400,000 S.F.
PARKING ALLOWED	1,334 SPACES (1 SP/300 S.F.)
FLOOR AREA RATIO	±1.95
MUNICIPAL COMPLEX	±27.2 ACRES
ARENA (10,000 SEATS)	±150,000 S.F.
PARKING ALLOWED	3,334 SPACES (1 SP/3 FIXED SEATS)
ARTS CENTER	±45,000 S.F.
CONVENTION CENTER	±52,000 S.F.
PARKING ALLOWED	1,040 SPACES (1 SP/50 S.F.)
2 HOTELS (5–STORY, 120+ ROOMS)	±200,000 S.F.
3 MULTI–STORY PARKING DECKS	±240 SPACES
PARKING ALLOWED	240 SPACES (1 SP/ROOM)
FLOOR AREA RATIO	±0.38

SITE & LAND ANALYSIS - RESIDENTIAL

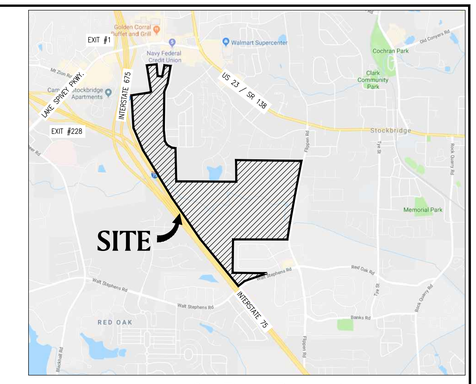
SINGLE FAMILY HOMES #1	±60.4 ACRES
TYPICAL 60' X 140' LOTS	±206 HOMES
HOUSING RATIO	±3.4/ACRES
PARKING ALLOWED	380 SPACES (2 SP/DWELLING UNIT)
SINGLE FAMILY HOMES #2	±22.4 S.F.
TYPICAL 60' X 120' LOTS	± 76 HOMES
HOUSING RATIO	±3.4/ACRE
PARKING ALLOWED	150 SPACES (2 SP/DWELLING UNIT)
TOWNHOMES	±18.0 ACRES
TYPICAL 45' X 120' LOTS	±130 HOMES
PARKING ALLOWED	102 SPACES (1 SP/DWELLING UNIT)
SENIOR CARE COMMUNITY	±32.1 ACRES
SINGLE FAMILY COTTAGES	±33 UNITS
DUPLEX FAMILY UNITS	±15 UNITS
4–STORY INDEPENDENT LIVING	±168 UNITS
3–STORY ASSISTED LIVING	±160 UNITS
MEMORY CARE	±40 UNITS
PARKING ALLOWED	416 SPACES (1 SP/BEDROOM)
APARTMENT HOMES	±32.4 ACRES
3 – BLDG. #1 (4–STORY)	
X 50 UNITS/FLOOR	±600 UNITS
2 – BLDG. #3 (4–STORY)	
X 25 UNITS/FLOOR	±200 UNITS
PARKING ALLOWED	1,600 SPACES (2 SP/DWELLING UNIT)

SITE & LAND ANALYSIS - PUBLIC DEDICATION

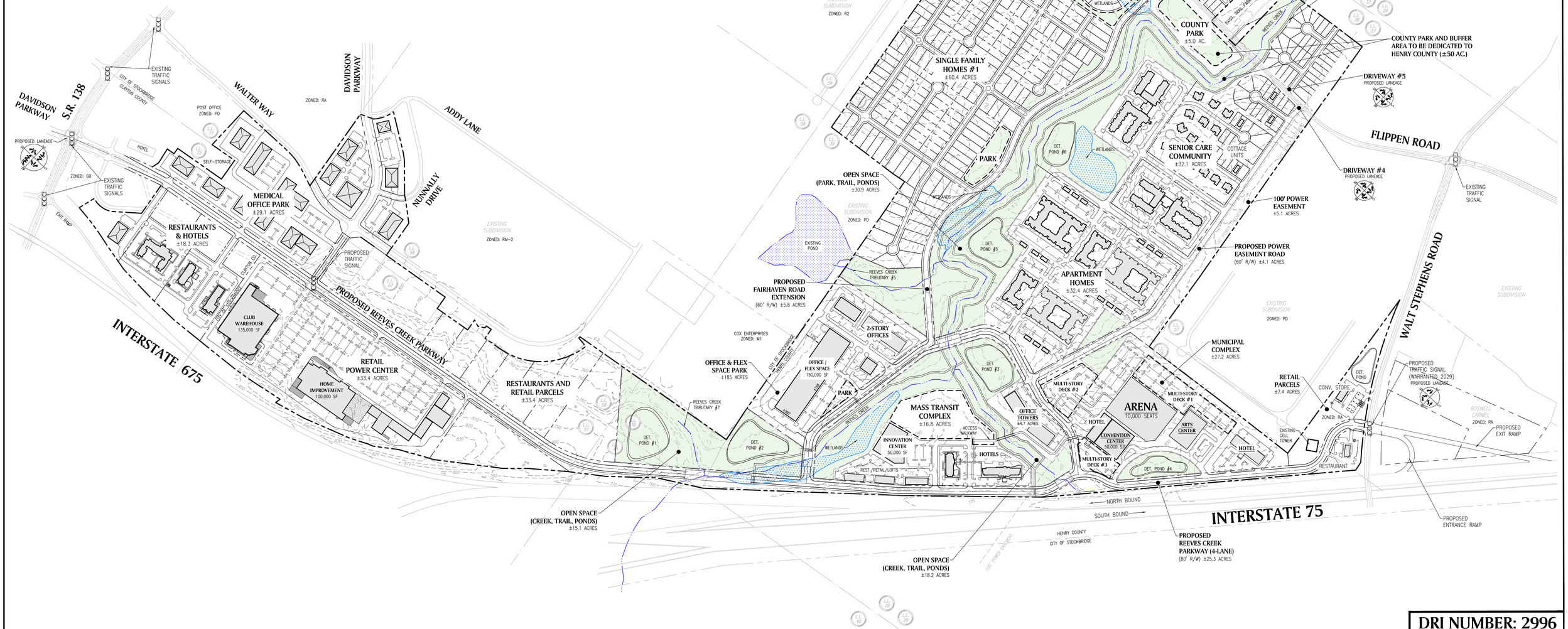
COUNTY PARK	±5.0 ACRES
PARKING ALLOWED	40 SPACES (8 SP/1 ACRE)
EXIST. 100' POWER EASEMENT	±5.1 ACRES
PROPOSED REEVES CREEK PARKWAY	±25.3 ACRES
4–LANE PARKWAY, 80' R/W,	
TOTAL ±2.56 MILES LONG	
PROPOSED FAIRHAVEN ROAD EXTENSION	±5.0 ACRES
3–LANE ROAD, 60' R/W	
TOTAL ±0.68 MILES LONG	
PROPOSED POWER EASEMENT ROAD	±4.1 ACRES
3–LANE ROAD, 60' R/W,	
TOTAL ±0.57 MILES LONG	

LAND USE SUMMARY

COMMERCIAL LAND USES	±145.4 ACRES (31.3%)
MUNICIPAL LAND USES	±27.2 ACRES (5.8%)
RESIDENTIAL LAND USES	±183.8 ACRES (39.5%)
OPEN SPACE	±74.3 ACRES (16.0%)
(3) ROAD DEDICATED RIGHT–OF–WAY	±34.4 ACRES (7.4%)
TOTAL LAND AREA	±465.1 ACRES



VICINITY MAP
HENRY COUNTY, GA SCALE: NTS



DRI NUMBER: 2996

PRELIMINARY SITE PLAN DISCLAIMER:

SITE PLAN IS BASED ON CLIENT PROVIDED INFORMATION POSSIBLY INCLUDING BUT NOT LIMITED TO THE FOLLOWING: TAX MAPS, USGS MAPS, GIS INFORMATION, SCANNED/DIGITAL BOUNDARY SURVEY, SCANNED/DIGITAL TOPOGRAPHICAL SURVEY, SCANNED/DIGITAL AS–BUILT PLAN, SCANNED/DIGITAL ALTA SURVEY, AND/OR PREVIOUS CONSTRUCTION PLANS BY PM/OTHERS. ALL ZONING INFORMATION SHOWN IN THE TITLEBLOCK TO THE RIGHT HAS BEEN RESEARCHED BUT NOT VERIFIED WITH THE JURISDICTION.

SITE PLAN BOUNDARY AND EXISTING CONDITIONS ARE ONLY AS ACCURATE AS THE INFORMATION PROVIDED.

SITE PLANNER:
CONTACT: JOHN WISE
PAULSON MITCHELL INCORPORATED
LAND PLANNERS
ENGINEERS • SURVEYORS
TRANSPORTATION
LANDSCAPE ARCHITECTS
85-A MILL STREET
SUITE 200
ROSWELL, GEORGIA 30075
VOICE 770.650.7685
FAX 770.650.7684
www.paulsonmitchell.com

TRAFFIC CONSULTANT:
LOWE ENGINEERS
CONTACT: JOSH PRUITT
990 HAMMOND DR, SUITE 900
ATLANTA, GA 30328
770.857.8400

FOR:
FOREST DEVELOPMENT GROUP
1475 BUFORD DRIVE
SUITE 403–117
LAWRENCEVILLE, GA 30043

PROJECT:
REEVES CREEK - A HENRY COUNTY MIXED USE PROJECT
LAND LOTS 26, 27, 38, 39, 40, 57 & 58, 12TH DISTRICT
HENRY COUNTY, GA 30281

DRI SITE PLAN

0 150 300 600 1200
SCALE: 1 = 300

2018196 DRI.dwg 08.21.19

DRI SITE PLAN

SHEET **EX-1**

APPENDIX B: Related Projects

Single Station Annualized Statistics - 063-0126

Station ID

063-0126

Latitude

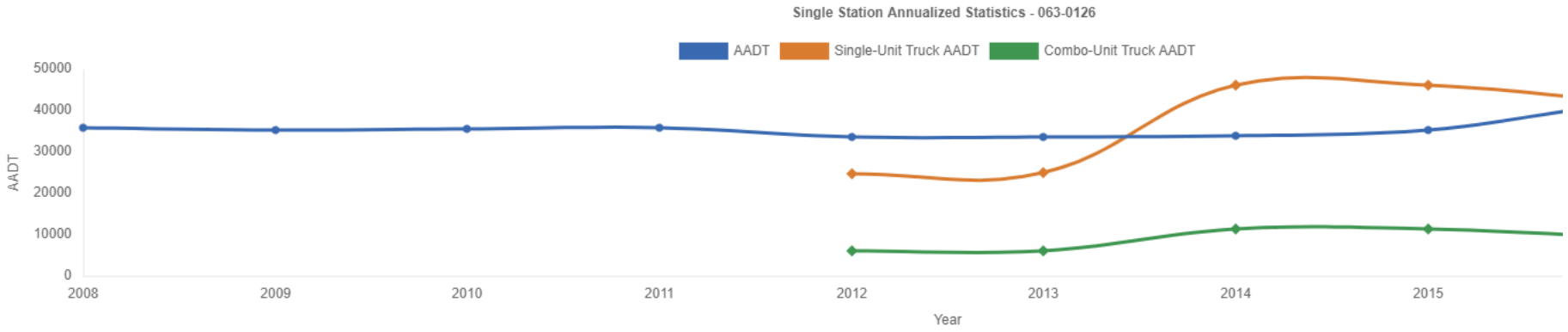
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Longitude

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Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	35980	35410	35680	36020	33520	33620	34000	35200	41400	**43800**	AADT
Single-Unit Truck AADT	-	-	-	-	496	498	924	924	848	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	121	121	225	225	188	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.106	0.099	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.032	0.027	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	0.079	0.079	0.071	-	K-Factor
D-Factor	-	-	-	-	-	-	0.500	0.500	0.500	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	43500	**47700**	Future AADT



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DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 063-0127

Station ID

063-0127

Latitude

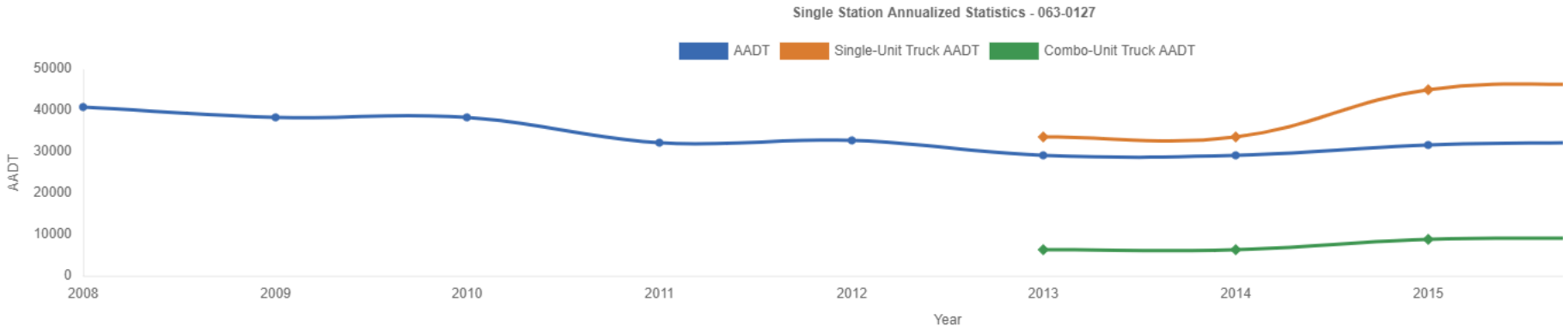
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AADT	40960	38390	38440	32290	32840	29050	29100	31600	32600	**34500**	AADT
Single-Unit Truck AADT	-	-	-	-	-	674	675	902	931	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	128	128	177	183	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.241	0.241	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.022	0.022	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	0.070	0.070	0.084	0.084	-	K-Factor
D-Factor	-	-	-	-	-	0.500	0.500	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	34100	**44200**	Future AADT



Save Chart Image

DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 063-0272

Station ID

063-0272

Latitude

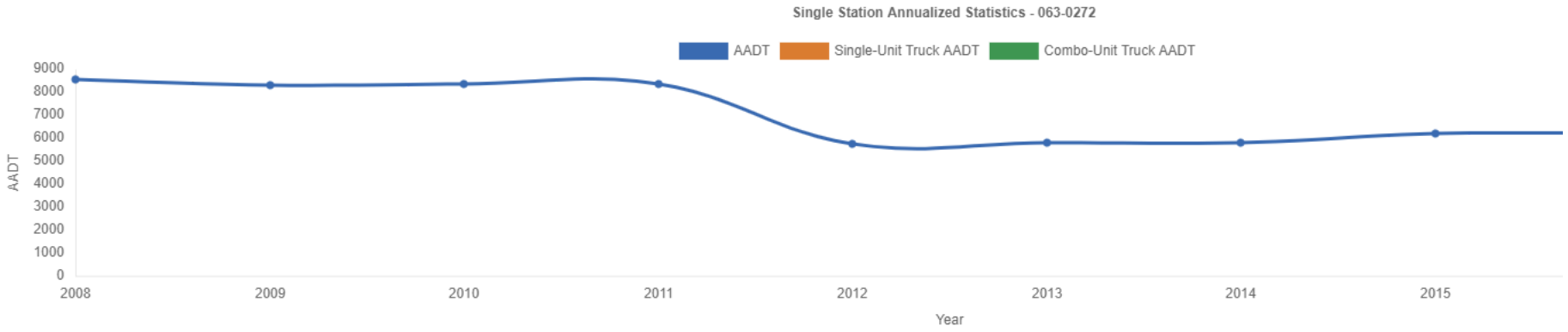
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Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	8580	8340	8360	8350	5760	5790	5790	6230	6280	**6650**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	-	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	-	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	-	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	-	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	-	0.119	-	K-Factor
D-Factor	-	-	-	-	-	-	-	-	0.500	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	7540	**8380**	Future AADT



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DRAKEWELL C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0221

Station ID

151-0221

Latitude

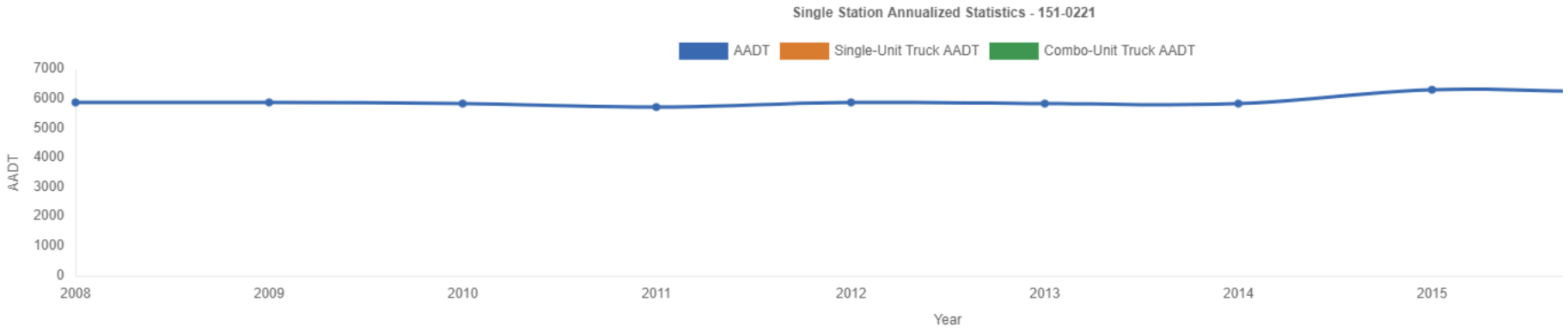
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Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	5890	5900	5850	5710	5900	5860	5860	6300	6290	**6660**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	118	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	16	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	0.254	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	0.016	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	-	0.136	-	K-Factor
D-Factor	-	-	-	-	-	-	-	-	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	7400	**7450**	Future AADT



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DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0243

Station ID

151-0243

Latitude

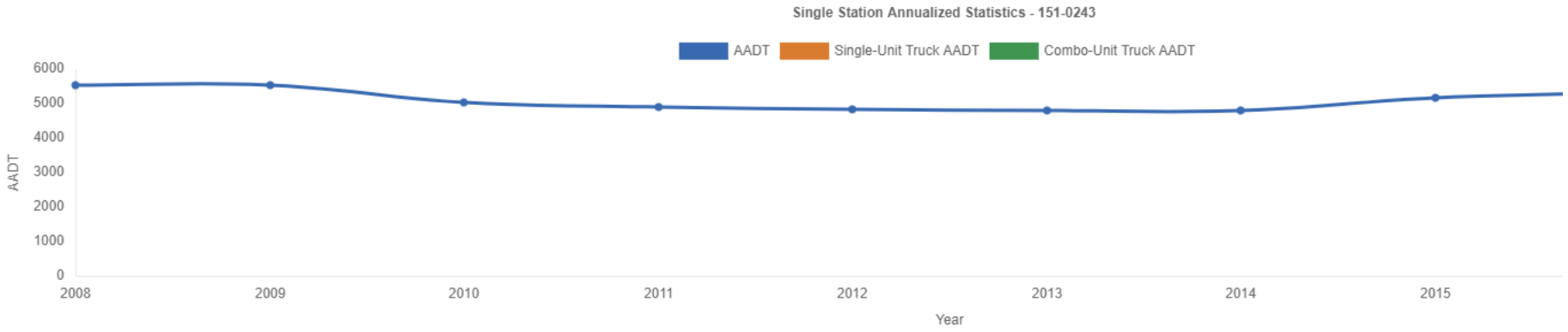
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Longitude

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Statistics type	-	-	-	-	-	-	-	Estimated	Estimated	**Estimated**	Statistics type
AADT	5550	5560	5040	4920	4830	4800	4800	5160	5330	**5640**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	-	**-**	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	-	**-**	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	-	**-**	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	-	**-**	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	-	-	**-**	K-Factor
D-Factor	-	-	-	-	-	-	-	-	-	**-**	D-Factor
Future AADT	-	-	-	-	-	-	-	-	5560	**7110**	Future AADT



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DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0245

Station ID

151-0245

Latitude

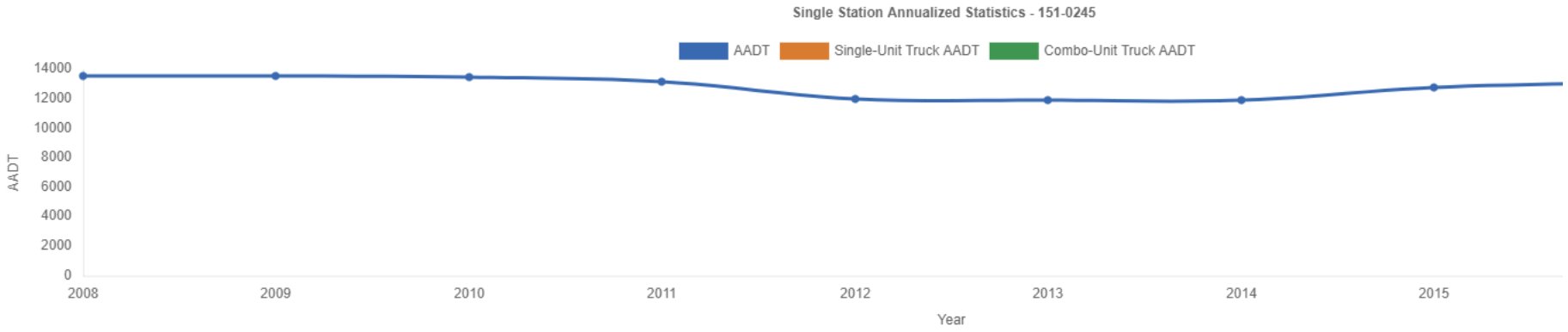
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Longitude

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Copy | Excel | Print

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Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	13560	13590	13470	13150	11990	11910	11900	12800	13200	**14000**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	214	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	39	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	0.091	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	0.008	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	-	0.104	-	K-Factor
D-Factor	-	-	-	-	-	-	-	-	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	14500	**17600**	Future AADT



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DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0247

Station ID

151-0247

Latitude

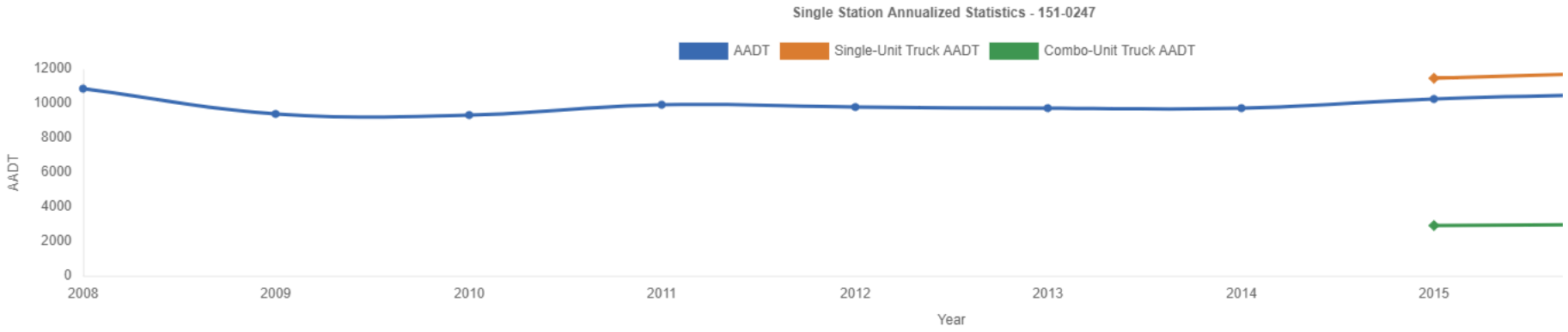
33.535480

Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	10900	9410	9330	9960	9790	9730	9730	10300	10600	**11200**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	134	138	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	34	35	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.078	0.078	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.019	0.019	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	0.107	0.107	-	K-Factor
D-Factor	-	-	-	-	-	-	-	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	11600	**14100**	Future AADT



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DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0252

Station ID

151-0252

Latitude

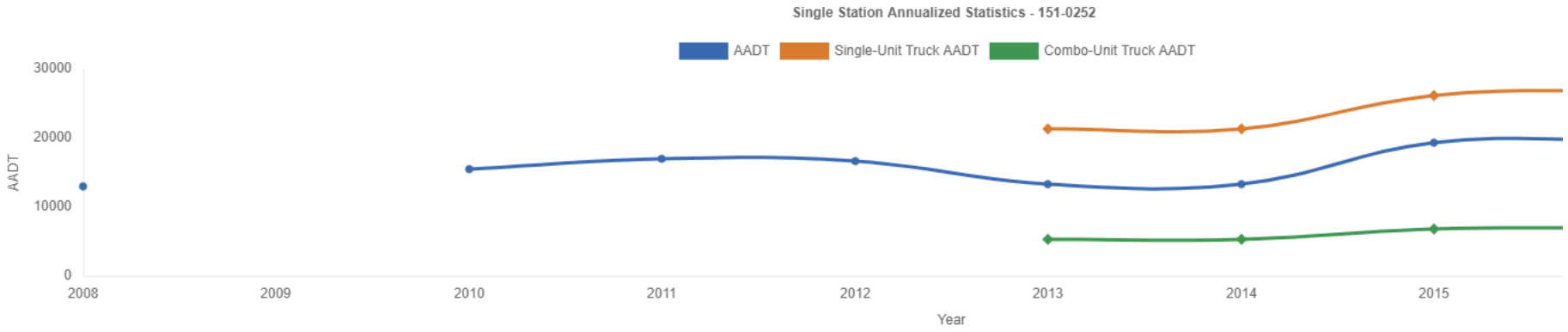
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Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	13000	-	15490	16940	16720	13330	13300	19300	19900	**21100**	AADT
Single-Unit Truck AADT	-	-	-	-	-	356	355	436	450	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	88	88	114	117	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.130	0.130	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.031	0.031	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	0.070	0.070	0.085	0.085	-	K-Factor
D-Factor	-	-	-	-	-	0.600	0.600	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	31800	**35800**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0254

Station ID

151-0254

Latitude

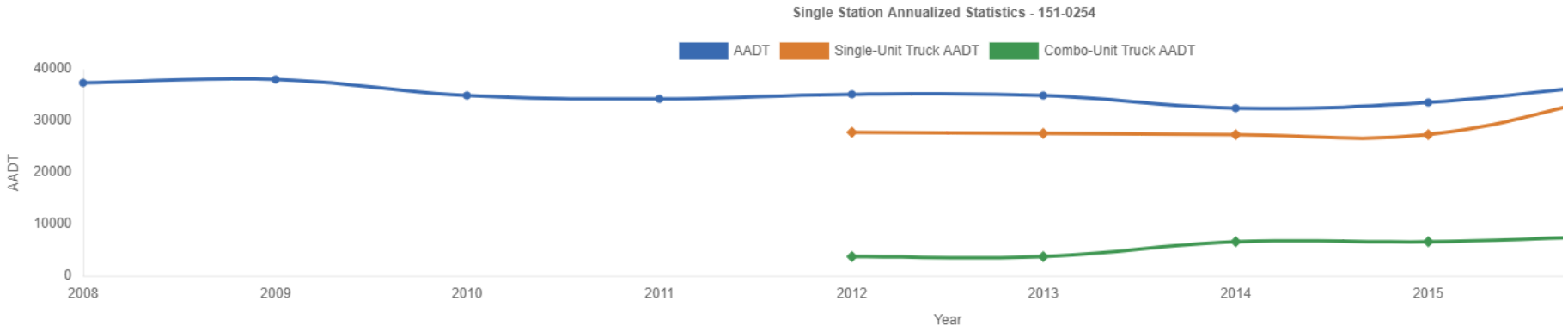
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Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	37380	38030	34880	34390	35170	35050	32500	33600	37200	**39400**	AADT
Single-Unit Truck AADT	-	-	-	-	834	831	818	818	1058	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	109	109	196	196	235	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.114	0.105	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.037	0.022	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	0.079	0.079	0.081	-	K-Factor
D-Factor	-	-	-	-	-	-	0.600	0.600	0.500	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	40700	**49600**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0256

Station ID

151-0256

Latitude

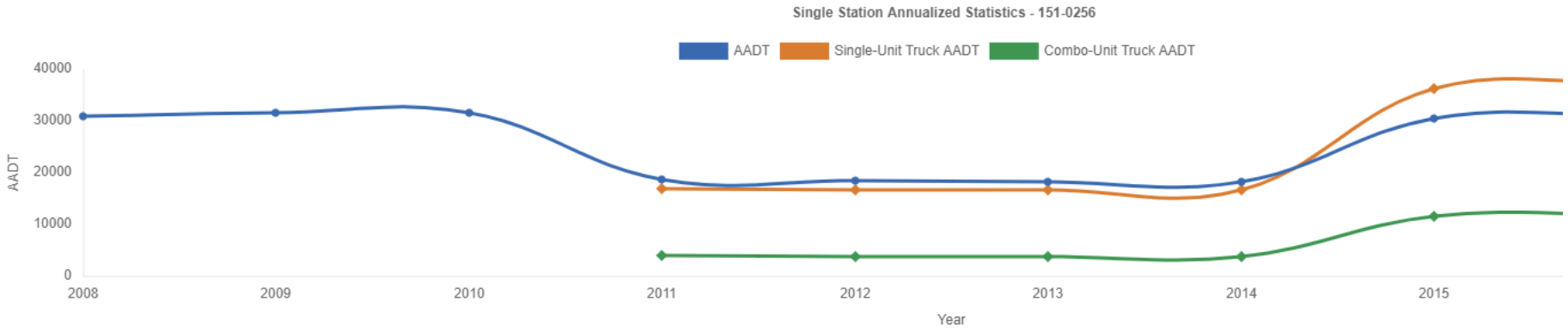
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Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	31040	31580	31640	18600	18360	18300	18300	30400	31400	**33200**	AADT
Single-Unit Truck AADT	-	-	-	379	375	373	373	818	845	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	86	85	84	84	259	267	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.135	0.135	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.033	0.033	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	0.083	0.083	-	K-Factor
D-Factor	-	-	-	-	-	-	-	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	37700	**41800**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0258

Station ID

151-0258

Latitude

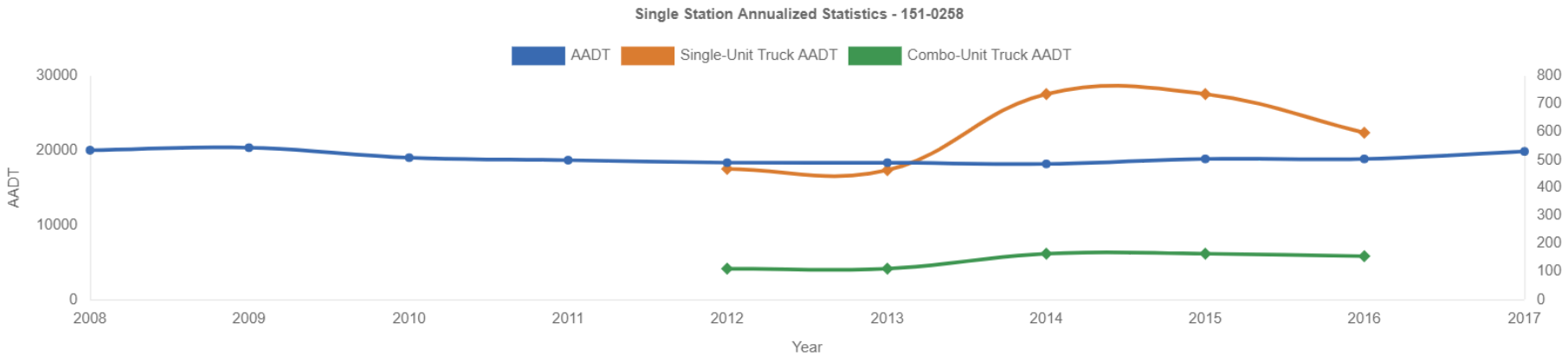
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Longitude

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	20040	20390	19020	18750	18340	18280	18200	18800	18800	**19900**	AADT
Single-Unit Truck AADT	-	-	-	-	466	464	737	737	597	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	112	112	165	165	156	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.352	0.112	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.049	0.064	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	0.103	0.103	0.103	-	K-Factor
D-Factor	-	-	-	-	-	-	0.700	0.700	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	21600	**25100**	Future AADT



DRAKEWELL

C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0274

Station ID

151-0274

Latitude

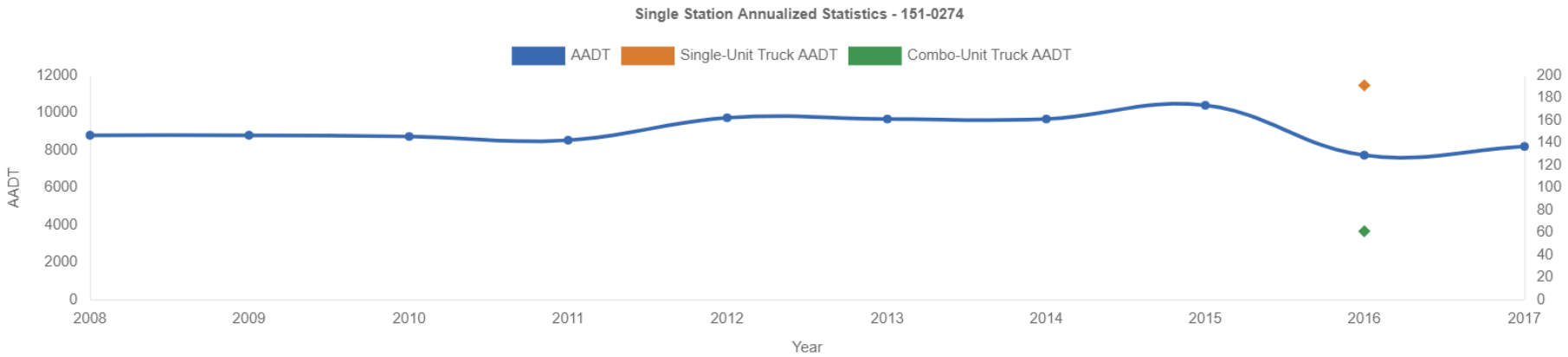
33.545434

Longitude

-84.232102

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	8790	8810	8730	8520	9750	9690	9690	10400	7770	**8230**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	191	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	61	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	0.129	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	0.039	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	-	0.104	-	K-Factor
D-Factor	-	-	-	-	-	-	-	-	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	10400	**8990**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0354

Station ID

151-0354

Latitude

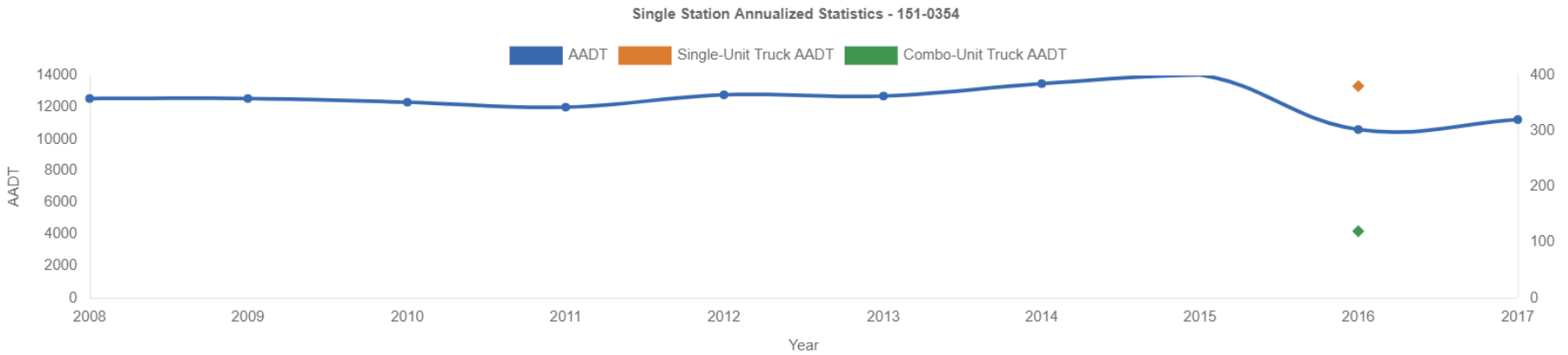
33.537759

Longitude

-84.201136

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	12550	12580	12310	12020	12810	12730	13500	14000	10600	**11200**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	380	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	119	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	0.189	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	0.057	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	0.102	0.102	0.100	-	K-Factor
D-Factor	-	-	-	-	-	-	0.500	0.500	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	14800	**12200**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0356

Station ID

151-0356

Latitude

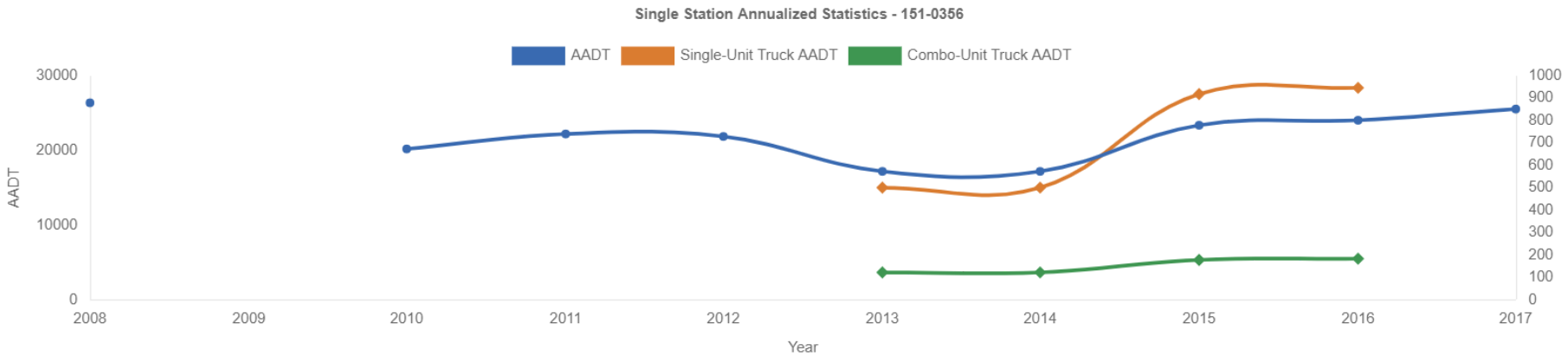
33.541038

Longitude

-84.211578

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	26380	-	20130	22150	21860	17120	17100	23300	24100	**25500**	AADT
Single-Unit Truck AADT	-	-	-	-	-	502	501	918	948	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	118	118	178	184	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.206	0.206	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.030	0.030	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	0.080	0.080	0.098	0.098	-	K-Factor
D-Factor	-	-	-	-	-	0.600	0.600	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	28900	**32100**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0358

Station ID

151-0358

Latitude

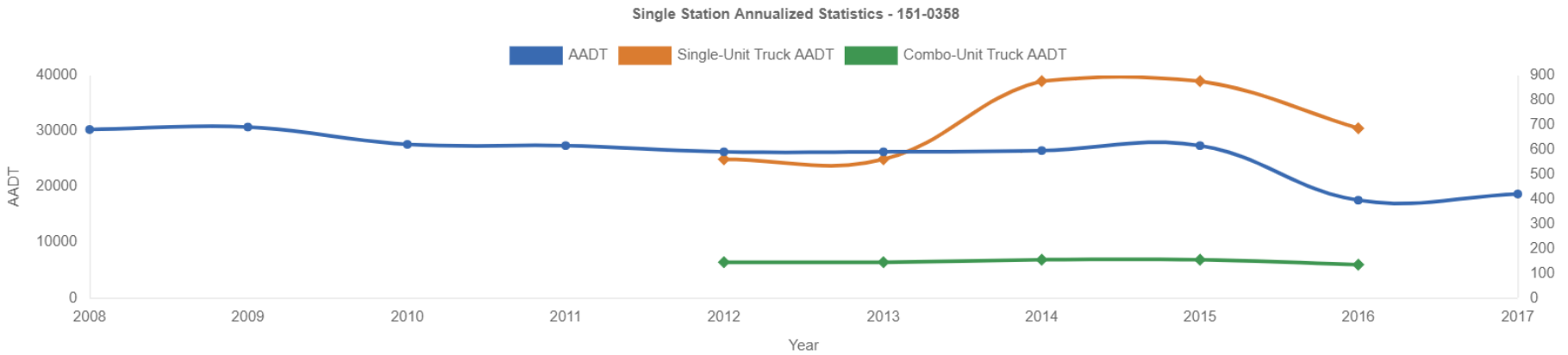
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Longitude

-84.229674

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	30180	30710	27700	27310	26340	26250	26500	27400	17600	**18600**	AADT
Single-Unit Truck AADT	-	-	-	-	561	559	876	876	684	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	142	142	152	152	134	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.155	0.176	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.026	0.051	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	0.090	0.090	0.157	-	K-Factor
D-Factor	-	-	-	-	-	-	0.600	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	27400	**21200**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0361

Station ID

151-0361

Latitude

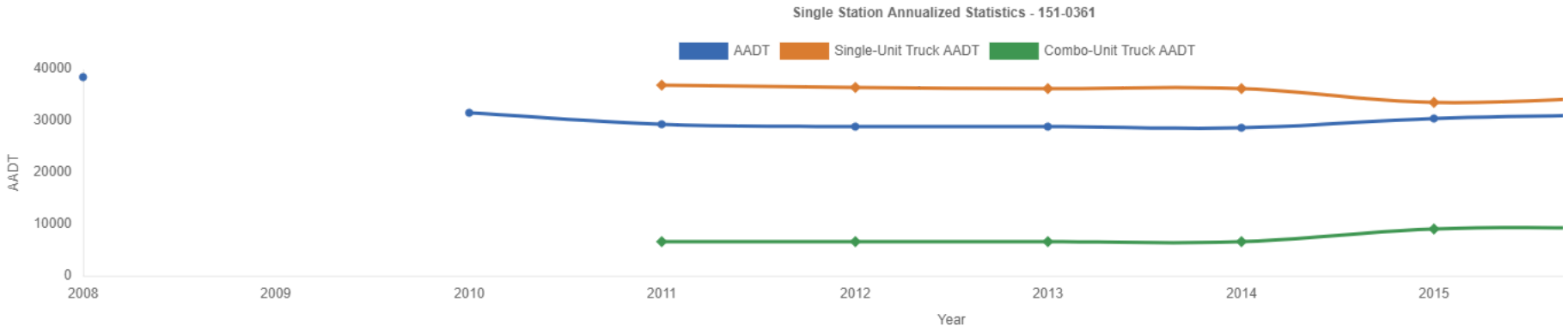
33.544390

Longitude

-84.238202

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	38430	-	31510	29320	28940	28840	28800	30400	31400	**33200**	AADT
Single-Unit Truck AADT	-	-	-	833	822	819	818	754	779	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	150	148	147	147	203	210	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.135	0.135	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.030	0.030	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	0.087	0.087	-	K-Factor
D-Factor	-	-	-	-	-	-	-	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	33200	**41800**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0363

Station ID

151-0363

Latitude

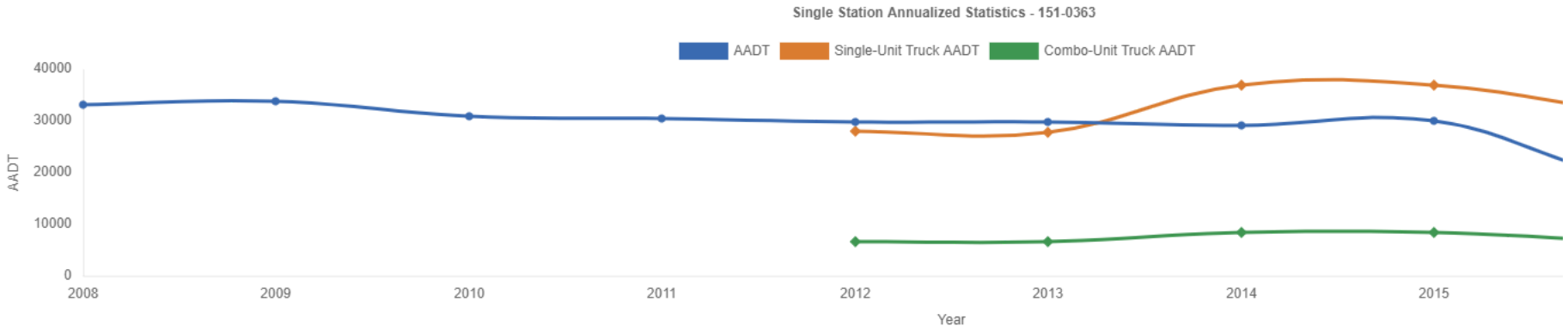
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Longitude

-84.255758

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Actual	**Estimated**	Statistics type
AADT	33170	33750	30870	30430	29930	29820	29100	30100	19500	**20600**	AADT
Single-Unit Truck AADT	-	-	-	-	629	626	832	832	710	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	150	149	188	188	151	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.134	0.190	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.027	0.056	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	0.089	0.089	0.149	-	K-Factor
D-Factor	-	-	-	-	-	-	0.600	0.600	0.700	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	30100	**23000**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0365

Station ID

151-0365

Latitude

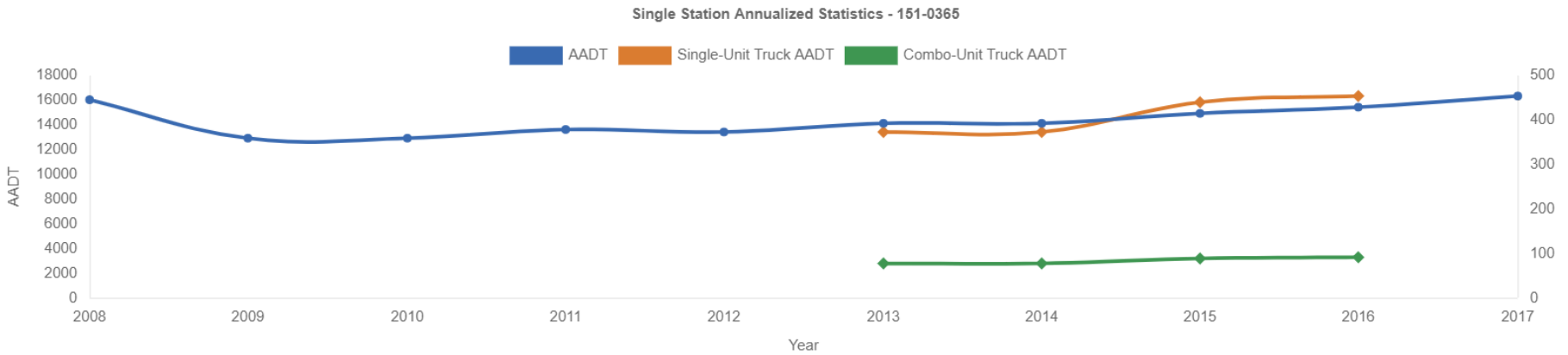
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Longitude

-84.261050

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	16020	12870	12890	13670	13430	14110	14100	14900	15400	**16300**	AADT
Single-Unit Truck AADT	-	-	-	-	-	373	372	439	453	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	76	76	88	91	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	0.161	0.161	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	0.067	0.067	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	0.090	0.090	0.092	0.092	-	K-Factor
D-Factor	-	-	-	-	-	0.600	0.600	0.600	0.600	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	16600	**20500**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0422

Station ID

151-0422

Latitude

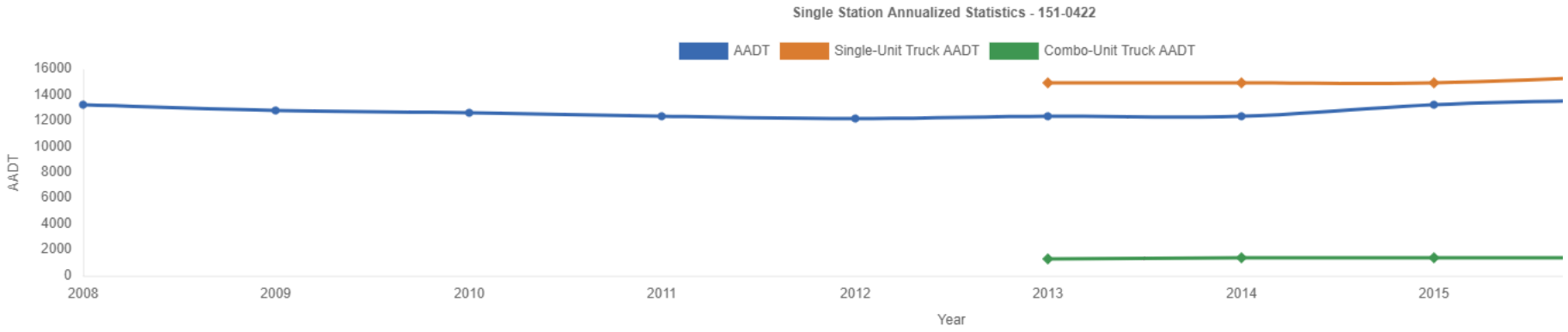
33.504231

Longitude

-84.245164

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Estimated	**Estimated**	Statistics type
AADT	13310	12830	12670	12370	12160	12350	12400	13300	13700	**14500**	AADT
Single-Unit Truck AADT	-	-	-	-	-	373	374	374	387	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	33	34	34	35	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	-	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	-	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	0.090	0.090	0.090	0.090	-	K-Factor
D-Factor	-	-	-	-	-	0.500	0.500	0.500	0.500	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	15300	**14800**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0477

Station ID

151-0477

Latitude

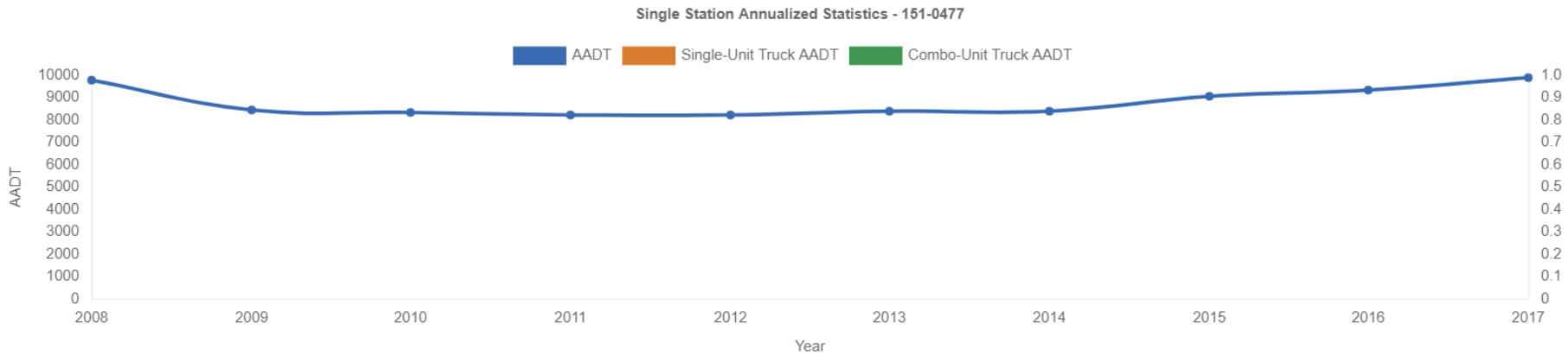
33.538061

Longitude

-84.225648

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Estimated	Estimated	**Estimated**	Statistics type
AADT	9810	8470	8360	8240	8230	8410	8410	9050	9350	**9900**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	-	**-**	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	-	**-**	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	-	**-**	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	-	**-**	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	-	-	**-**	K-Factor
D-Factor	-	-	-	-	-	-	-	-	-	**-**	D-Factor
Future AADT	-	-	-	-	-	-	-	-	9920	**12500**	Future AADT



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C2-Cloud Traffic Data

Single Station Annualized Statistics - 151-0485

Station ID

151-0485

Latitude

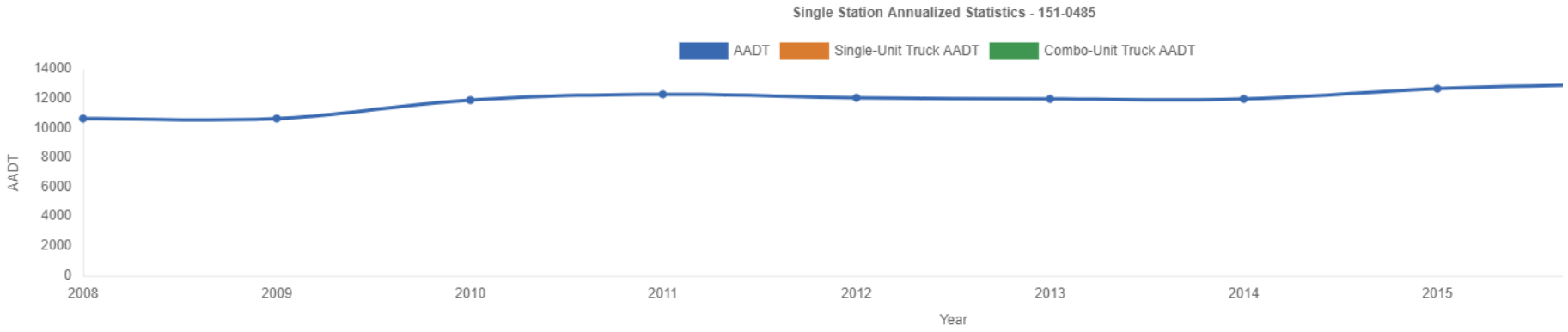
33.539014

Longitude

-84.277032

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Data Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Data Item
Statistics type	-	-	-	-	-	-	-	Actual	Estimated	**Estimated**	Statistics type
AADT	10650	10670	11950	12300	12090	12010	12000	12700	13100	**13900**	AADT
Single-Unit Truck AADT	-	-	-	-	-	-	-	-	-	-	Single-Unit Truck AADT
Combo-Unit Truck AADT	-	-	-	-	-	-	-	-	-	-	Combo-Unit Truck AADT
% Peak SU Trucks	-	-	-	-	-	-	-	-	-	-	% Peak SU Trucks
% Peak CU Trucks	-	-	-	-	-	-	-	-	-	-	% Peak CU Trucks
K-Factor	-	-	-	-	-	-	-	0.102	0.102	-	K-Factor
D-Factor	-	-	-	-	-	-	-	0.500	0.500	-	D-Factor
Future AADT	-	-	-	-	-	-	-	-	18000	**19600**	Future AADT



Save Chart Image

DRAKEWELL

C2-Cloud Traffic Data

Prepared by National Data & Surveying Services

CLASSIFICATION

Walt Stephens Rd Bet. Flippen Rd & SR-75

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_001e

East Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	17	2	0	0	0	0	0	0	0	0	0	0	19
00:15	0	14	0	0	0	0	0	0	0	0	0	0	0	14
00:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
00:45	0	13	0	1	0	0	0	0	0	0	0	0	0	14
01:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
01:15	0	10	0	0	0	1	0	0	0	0	0	0	0	11
01:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
01:45	0	9	1	0	0	0	0	0	0	0	0	0	0	10
02:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
02:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
02:45	0	8	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
03:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:45	0	3	3	0	0	0	0	0	0	0	0	0	0	6
04:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:15	0	6	1	0	0	0	0	0	0	0	0	0	0	7
04:30	0	12	1	0	0	0	0	0	0	0	0	0	0	13
04:45	0	6	2	0	0	0	0	0	0	0	0	0	0	8
05:00	0	16	3	0	1	0	0	0	0	0	0	0	0	20
05:15	0	9	2	0	1	0	0	0	0	0	0	0	0	12
05:30	0	22	1	0	0	0	0	0	0	0	0	0	0	23
05:45	0	30	3	0	1	0	0	0	0	0	0	0	0	34
06:00	0	32	5	1	1	0	0	0	0	0	0	0	0	39
06:15	0	34	5	0	1	1	0	0	0	0	0	0	0	41
06:30	0	52	7	0	1	0	0	0	0	0	0	0	0	60
06:45	0	68	5	1	1	0	0	0	0	0	0	0	0	75
07:00	0	97	12	0	0	0	0	0	0	0	0	0	0	109
07:15	0	152	17	1	4	0	0	0	0	0	0	0	0	174
07:30	0	167	13	0	4	0	0	0	0	0	0	0	0	184
07:45	0	156	10	0	0	0	0	0	0	0	0	0	0	166
08:00	0	104	15	0	2	0	0	0	0	0	0	0	0	121
08:15	0	106	12	0	2	0	0	0	0	0	0	0	0	120
08:30	0	92	14	1	2	0	0	0	0	0	0	0	0	109
08:45	1	90	9	0	0	0	0	0	0	0	0	0	0	100
09:00	0	75	8	0	2	0	0	0	0	0	0	0	0	85
09:15	0	77	16	0	0	0	0	0	0	0	0	0	0	93
09:30	0	82	10	0	4	2	0	1	0	0	0	0	0	99
09:45	0	92	8	0	1	0	0	0	0	0	0	0	0	101
10:00	0	67	7	0	0	0	0	0	0	0	0	0	0	74
10:15	1	67	12	0	1	1	0	0	0	0	0	0	0	82
10:30	0	84	11	0	2	0	0	0	0	0	0	0	0	97
10:45	0	86	7	1	1	0	0	0	0	0	0	0	0	95
11:00	0	72	13	0	0	0	0	0	0	0	0	0	0	85
11:15	0	93	11	0	3	0	0	0	0	0	0	0	0	107
11:30	1	78	16	0	3	0	0	0	0	0	0	0	0	98
11:45	0	73	13	0	1	0	0	0	0	0	0	0	0	87
12:00 PM	0	76	11	0	0	0	0	0	0	0	0	0	0	87
12:15	0	74	15	0	0	0	0	0	0	0	0	0	0	89
12:30	0	95	19	0	1	1	0	0	0	0	0	0	0	116
12:45	0	92	9	0	0	0	0	0	0	0	0	0	0	101
13:00	0	86	12	0	1	0	0	1	0	0	0	0	0	100
13:15	0	90	10	0	4	0	0	0	0	0	0	0	0	104
13:30	0	98	16	0	2	1	0	0	0	0	0	0	0	117
13:45	0	101	11	0	1	1	0	1	0	0	0	0	0	115
14:00	0	99	22	0	0	0	0	0	0	0	0	0	0	121
14:15	0	123	14	1	4	1	0	0	0	0	0	0	0	143
14:30	1	129	19	0	3	0	0	0	0	0	0	0	0	152
14:45	0	140	16	0	7	1	0	0	0	0	0	0	0	164
15:00	0	128	17	2	3	0	0	0	0	0	0	0	0	150
15:15	0	106	21	1	5	1	0	0	0	0	0	0	0	134
15:30	1	147	14	0	2	0	0	0	0	0	0	0	0	164
15:45	0	147	18	3	3	1	0	0	0	0	0	0	0	172
16:00	0	128	35	0	4	0	0	0	0	0	0	0	0	167
16:15	0	142	17	0	3	0	0	0	0	0	0	0	0	162
16:30	1	137	27	1	2	0	0	0	0	0	0	0	0	168
16:45	0	162	29	2	4	0	0	0	0	0	0	0	0	197
17:00	0	178	34	1	3	1	0	0	0	0	0	0	0	217
17:15	0	205	21	0	0	0	0	0	0	0	0	0	0	226
17:30	0	205	28	0	0	0	0	0	1	0	0	0	0	234
17:45	0	180	18	0	2	0	0	0	0	0	0	0	0	200
18:00	0	189	21	0	1	0	0	0	0	0	0	0	0	211
18:15	0	171	14	0	2	0	0	0	0	0	0	0	0	187
18:30	0	117	15	0	1	0	0	0	0	0	0	0	0	133
18:45	0	144	18	0	1	1	0	0	0	0	0	0	0	164
19:00	0	113	18	0	1	0	0	1	0	0	0	0	0	133
19:15	0	119	15	0	0	0	0	0	0	0	0	0	0	134
19:30	0	102	8	0	1	0	0	0	0	0	0	0	0	111
19:45	0	88	10	0	0	0	0	0	0	0	0	0	0	98
20:00	0	63	7	0	0	0	0	0	0	0	0	0	0	70
20:15	0	78	4	0	0	1	0	0	0	0	0	0	0	83
20:30	0	66	6	0	0	0	0	0	0	0	0	0	0	72
20:45	0	60	3	0	0	0	0	0	0	0	0	0	0	63
21:00	0	59	8	0	0	0	0	0	0	0	0	0	0	67
21:15	0	64	3	0	0	0	0	0	0	0	0	0	0	67
21:30	0	63	5	0	0	0	0	0	0	0	0	0	0	68
21:45	1	62	8	0	0	0	0	0	0	0	0	0	0	71
22:00	0	51	4	0	0	0	0	0	0	0	0	0	0	55
22:15	0	35	1	1	0	0	0	0	0	0	0	0	0	37
22:30	0	36	4	0	0	0	0	0	0	0	0	0	0	40
22:45	0	29	2	0	0	0	1	0	0	0	0	0	0	32
23:00	0	39	2	0	0	0	0	0	0	0	0	0	0	41
23:15	0	23	2	0	0	0	0	0	0	0	0	0	0	25
23:30	0	25	1	0	0	0	0	0	0	0	0	0	0	26
23:45	0	20	3	0	0	0	0	0	0	0	0	0	0	23
Totals	**7**	**7218**	**915**	**18**	**100**	**15**	**1**	**4**	**1**					**8279**
% of Totals	0%	87%	11%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	3	2334	280	6	39	5	0	1	0	0	0	0	0	2668
% AM	0%	28%	3%	0%	0%	0%		0%						32%
AM Peak Hour	08:00	07:15	11:45	06:00	07:15	09:30		08:45						07:15
Volume	1	579	58	2	10	3		1						645
PM Volumes	4	4884	635	12	61	10	1	3	1	0	0	0	0	5611
% PM	0%	59%	8%	0%	1%	0%	0%	0%	0%					68%
PM Peak Hour	13:45	17:15	16:45	15:00	14:30	13:30	22:00	13:00	16:45					17:00
Volume	1	779	112	6	18	3	1	2	1					877

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	1083	⟷	13%	829	⟷	10%	1571	⟷	19%	4796	⟷	58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Walt Stephens Rd Bet. Flippen Rd & SR-75

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_001w

West Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	17	0	0	0	1	0	0	0	0	0	0	0	18
00:15	0	13	0	0	0	0	0	0	0	0	0	0	0	13
00:30	0	9	0	0	0	0	0	0	0	0	0	0	0	9
00:45	0	13	0	0	0	0	0	0	0	0	0	0	0	13
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
01:15	0	13	2	0	0	0	0	0	0	0	0	0	0	15
01:30	0	9	2	0	0	0	0	0	0	0	0	0	0	11
01:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
02:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7
03:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
03:15	0	9	1	0	0	0	0	0	0	0	0	0	0	10
03:30	0	1	2	0	1	0	0	0	0	0	0	0	0	4
03:45	0	10	1	0	0	0	0	0	0	0	0	0	0	11
04:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
04:15	0	12	1	0	0	0	0	0	0	0	0	0	0	13
04:30	0	9	2	0	0	0	0	0	0	0	0	0	0	11
04:45	0	12	2	0	0	0	0	0	0	0	0	0	0	14
05:00	1	17	4	0	0	0	0	0	0	0	0	0	0	22
05:15	0	26	3	0	3	0	0	0	0	0	0	0	0	32
05:30	0	27	3	0	1	0	0	0	0	0	0	0	0	31
05:45	1	37	4	1	0	0	0	0	0	0	0	0	0	43
06:00	0	34	7	0	1	1	0	0	0	0	0	0	0	43
06:15	0	38	9	0	5	0	0	1	0	0	0	0	0	53
06:30	0	69	9	2	4	0	0	0	0	0	0	0	0	84
06:45	0	84	14	0	2	0	0	0	0	0	0	0	0	100
07:00	0	111	16	0	1	0	0	0	0	0	0	0	0	128
07:15	0	144	10	0	10	1	0	0	0	0	0	0	0	165
07:30	0	139	14	0	2	1	0	0	0	0	0	0	0	156
07:45	0	121	11	0	1	1	0	1	0	0	0	0	0	135
08:00	0	99	14	0	2	0	0	0	0	0	0	0	0	115
08:15	0	91	14	0	2	0	0	1	0	0	0	0	0	108
08:30	0	94	15	0	3	1	0	0	0	0	0	0	0	113
08:45	0	79	14	1	2	0	0	1	0	0	0	0	0	97
09:00	0	75	10	1	3	0	0	0	0	0	0	0	0	89
09:15	0	65	13	0	3	0	0	0	0	0	0	0	0	81
09:30	0	76	23	0	0	0	0	0	0	0	0	0	0	99
09:45	0	76	20	0	3	0	0	0	0	0	0	0	0	99
10:00	0	66	18	1	4	0	0	0	0	0	0	0	0	89
10:15	0	59	13	0	0	0	0	0	0	0	0	0	0	72
10:30	0	70	15	0	2	1	0	0	0	0	0	0	0	88
10:45	0	71	13	0	2	0	0	0	0	0	0	0	0	86
11:00	0	62	13	0	0	0	0	1	0	0	0	0	0	76
11:15	0	54	13	0	3	0	0	0	0	0	0	0	0	70
11:30	0	76	9	1	1	0	0	1	0	0	0	0	0	88
11:45	0	76	19	0	1	0	0	0	0	0	0	0	0	96
12:00 PM	0	96	21	0	1	0	0	0	0	0	0	0	0	118
12:15	0	79	16	0	4	0	0	0	0	0	0	0	0	99
12:30	0	81	17	0	0	1	0	0	0	0	0	0	0	99
12:45	0	95	13	0	1	0	0	2	0	0	0	0	0	111
13:00	0	94	18	0	4	0	0	0	0	0	0	0	0	116
13:15	0	105	13	0	2	0	0	0	0	0	0	0	0	120
13:30	0	82	12	0	2	1	0	0	0	0	0	0	0	97
13:45	0	105	14	1	2	0	0	3	0	0	0	0	0	125
14:00	0	88	20	0	4	1	0	0	0	0	0	0	0	113
14:15	0	95	11	0	1	0	0	1	0	0	0	0	0	108
14:30	0	109	21	2	3	0	0	0	0	0	0	0	0	135
14:45	0	124	20	0	5	0	0	0	0	0	0	0	0	149
15:00	0	101	20	0	5	0	0	0	0	0	0	0	0	126
15:15	0	108	22	1	2	0	0	0	0	0	0	0	0	133
15:30	0	109	17	2	5	0	0	0	0	0	0	0	0	133
15:45	0	106	12	1	4	0	0	0	0	0	0	0	0	123
16:00	0	108	17	0	2	0	0	0	0	0	0	0	0	127
16:15	0	125	19	1	4	0	0	0	0	0	0	0	0	149
16:30	0	133	16	3	6	2	0	0	0	0	0	0	0	160
16:45	1	145	25	0	1	0	0	0	0	0	0	0	0	172
17:00	0	138	17	0	3	0	0	0	0	0	0	0	0	158
17:15	0	152	21	0	2	0	0	0	0	0	0	0	0	175
17:30	0	152	15	0	2	0	0	0	0	0	0	0	0	169
17:45	0	144	11	0	2	0	0	0	0	0	0	0	0	157
18:00	0	144	19	0	1	0	0	0	0	0	0	0	0	164
18:15	0	129	17	1	1	0	0	0	0	0	0	0	0	148
18:30	0	142	17	0	0	0	0	0	0	0	0	0	0	159
18:45	0	110	15	0	0	0	0	0	0	0	0	0	0	125
19:00	0	125	17	0	1	0	0	0	0	0	0	0	0	143
19:15	0	113	9	0	0	0	0	0	0	0	0	0	0	122
19:30	0	121	25	0	1	0	0	0	0	0	0	0	0	147
19:45	0	114	12	0	0	0	0	0	0	0	0	0	0	126
20:00	0	86	11	0	0	0	0	0	0	0	0	0	0	97
20:15	0	92	12	0	0	0	0	0	0	0	0	0	0	104
20:30	0	80	9	0	0	0	0	0	0	0	0	0	0	89
20:45	0	72	7	0	0	0	0	0	0	0	0	0	0	79
21:00	0	78	10	1	0	0	0	0	0	0	0	0	0	89
21:15	0	59	10	0	0	0	0	0	0	0	0	0	0	69
21:30	0	59	10	0	0	0	0	0	0	0	0	0	0	69
21:45	0	64	2	0	0	1	0	0	0	0	0	0	0	67
22:00	0	46	2	0	0	0	0	0	0	0	0	0	0	48
22:15	0	40	2	0	0	0	0	0	0	0	0	0	0	42
22:30	0	32	5	0	1	1	0	0	0	0	0	0	0	39
22:45	0	34	4	0	0	0	0	0	0	0	0	0	0	38
23:00	0	34	1	0	0	0	0	0	0	0	0	0	0	35
23:15	0	40	4	0	1	0	0	0	0	0	0	0	0	45
23:30	0	28	3	0	1	0	0	0	0	0	0	0	0	32
23:45	0	24	3	0	0	0	0	0	0	0	0	0	0	27
Totals	3	6747	989	20	136	14		12						7921
% of Totals	0%	85%	12%	0%	2%	0%		0%						100%

AM Volumes	2	2207	355	7	62	7	0	6	0	0	0	0	0	2646
% AM	0%	28%	4%	0%	1%	0%		0%						33%
AM Peak Hour	05:00	07:00	09:15	05:45	06:30	07:00		07:30						07:00
Volume	2	515	74	3	17	3		2						584
PM Volumes	1	4540	634	13	74	7	0	6	0	0	0	0	0	5275
% PM	0%	57%	8%	0%	1%	0%		0%						67%
PM Peak Hour	16:00	17:15	14:30	15:45	14:45	13:15		13:30						16:45
Volume	1	592	83	5	17	2		4						674

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1017		13%	885		11%	1267		16%	4752		60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Walt Stephens Rd Bet. Flippen Rd & SR-75

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	34	2	0	0	1	0	0	0	0	0	0	0	37
00:15	0	27	0	0	0	0	0	0	0	0	0	0	0	27
00:30	0	19	1	0	0	0	0	0	0	0	0	0	0	20
00:45	0	26	0	1	0	0	0	0	0	0	0	0	0	27
01:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
01:15	0	23	2	0	0	1	0	0	0	0	0	0	0	26
01:30	0	19	3	0	0	0	0	0	0	0	0	0	0	22
01:45	0	13	1	0	0	0	0	0	0	0	0	0	0	14
02:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
02:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
02:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
02:45	0	15	0	0	0	0	0	0	0	0	0	0	0	15
03:00	0	12	1	0	0	0	0	0	0	0	0	0	0	13
03:15	0	14	1	0	0	0	0	0	0	0	0	0	0	15
03:30	0	6	2	0	1	0	0	0	0	0	0	0	0	9
03:45	0	13	4	0	0	0	0	0	0	0	0	0	0	17
04:00	0	14	0	0	0	0	0	0	0	0	0	0	0	14
04:15	0	18	2	0	0	0	0	0	0	0	0	0	0	20
04:30	0	21	3	0	0	0	0	0	0	0	0	0	0	24
04:45	0	18	4	0	0	0	0	0	0	0	0	0	0	22
05:00	1	33	7	0	1	0	0	0	0	0	0	0	0	42
05:15	0	35	5	0	4	0	0	0	0	0	0	0	0	44
05:30	0	49	4	0	1	0	0	0	0	0	0	0	0	54
05:45	1	67	7	1	1	0	0	0	0	0	0	0	0	77
06:00	0	66	12	1	2	1	0	0	0	0	0	0	0	82
06:15	0	72	14	0	6	1	0	1	0	0	0	0	0	94
06:30	0	121	16	2	5	0	0	0	0	0	0	0	0	144
06:45	0	152	19	1	3	0	0	0	0	0	0	0	0	175
07:00	0	208	28	0	1	0	0	0	0	0	0	0	0	237
07:15	0	296	27	1	14	1	0	0	0	0	0	0	0	339
07:30	0	306	27	0	6	1	0	0	0	0	0	0	0	340
07:45	0	277	21	0	1	1	0	1	0	0	0	0	0	301
08:00	0	203	29	0	4	0	0	0	0	0	0	0	0	236
08:15	0	197	26	0	4	0	0	1	0	0	0	0	0	228
08:30	0	186	29	1	5	1	0	0	0	0	0	0	0	222
08:45	1	169	23	1	2	0	0	1	0	0	0	0	0	197
09:00	0	150	18	1	5	0	0	0	0	0	0	0	0	174
09:15	0	142	29	0	3	0	0	0	0	0	0	0	0	174
09:30	0	158	33	0	4	2	0	1	0	0	0	0	0	198
09:45	0	168	28	0	4	0	0	0	0	0	0	0	0	200
10:00	0	133	25	1	4	0	0	0	0	0	0	0	0	163
10:15	1	126	25	0	1	1	0	0	0	0	0	0	0	154
10:30	0	154	26	0	4	1	0	0	0	0	0	0	0	185
10:45	0	157	20	1	3	0	0	0	0	0	0	0	0	181
11:00	0	134	26	0	0	0	0	1	0	0	0	0	0	161
11:15	0	147	24	0	6	0	0	0	0	0	0	0	0	177
11:30	1	154	25	1	4	0	0	1	0	0	0	0	0	186
11:45	0	149	32	0	2	0	0	0	0	0	0	0	0	183
12:00 PM	0	172	32	0	1	0	0	0	0	0	0	0	0	205
12:15	0	153	31	0	4	0	0	0	0	0	0	0	0	188
12:30	0	176	36	0	1	2	0	0	0	0	0	0	0	215
12:45	0	187	22	0	1	0	0	2	0	0	0	0	0	212
13:00	0	180	30	0	5	0	0	1	0	0	0	0	0	216
13:15	0	195	23	0	6	0	0	0	0	0	0	0	0	224
13:30	0	180	28	0	4	2	0	0	0	0	0	0	0	214
13:45	0	206	25	1	3	1	0	4	0	0	0	0	0	240
14:00	0	187	42	0	4	1	0	0	0	0	0	0	0	234
14:15	0	218	25	1	5	1	0	1	0	0	0	0	0	251
14:30	1	238	40	2	6	0	0	0	0	0	0	0	0	287
14:45	0	264	36	0	12	1	0	0	0	0	0	0	0	313
15:00	0	229	37	2	8	0	0	0	0	0	0	0	0	276
15:15	0	214	43	2	7	1	0	0	0	0	0	0	0	267
15:30	1	256	31	2	7	0	0	0	0	0	0	0	0	297
15:45	0	253	30	4	7	1	0	0	0	0	0	0	0	295
16:00	0	236	52	0	6	0	0	0	0	0	0	0	0	294
16:15	0	267	36	1	7	0	0	0	0	0	0	0	0	311
16:30	1	270	43	4	8	2	0	0	0	0	0	0	0	328
16:45	1	307	54	2	5	0	0	0	0	0	0	0	0	369
17:00	0	316	51	1	6	1	0	0	0	0	0	0	0	375
17:15	0	357	42	0	2	0	0	0	0	0	0	0	0	401
17:30	0	357	43	0	2	0	0	0	1	0	0	0	0	403
17:45	0	324	29	0	4	0	0	0	0	0	0	0	0	357
18:00	0	333	40	0	2	0	0	0	0	0	0	0	0	375
18:15	0	300	31	1	3	0	0	0	0	0	0	0	0	335
18:30	0	259	32	0	1	0	0	0	0	0	0	0	0	292
18:45	0	254	33	0	1	1	0	0	0	0	0	0	0	289
19:00	0	238	35	0	2	0	0	1	0	0	0	0	0	276
19:15	0	232	24	0	0	0	0	0	0	0	0	0	0	256
19:30	0	223	33	0	2	0	0	0	0	0	0	0	0	258
19:45	0	202	22	0	0	0	0	0	0	0	0	0	0	224
20:00	0	149	18	0	0	0	0	0	0	0	0	0	0	167
20:15	0	170	16	0	0	1	0	0	0	0	0	0	0	187
20:30	0	146	15	0	0	0	0	0	0	0	0	0	0	161
20:45	0	132	10	0	0	0	0	0	0	0	0	0	0	142
21:00	0	137	18	1	0	0	0	0	0	0	0	0	0	156
21:15	0	123	13	0	0	0	0	0	0	0	0	0	0	136
21:30	0	122	15	0	0	0	0	0	0	0	0	0	0	137
21:45	1	126	10	0	0	1	0	0	0	0	0	0	0	138
22:00	0	97	6	0	0	0	0	0	0	0	0	0	0	103
22:15	0	75	3	1	0	0	0	0	0	0	0	0	0	79
22:30	0	68	9	0	1	1	0	0	0	0	0	0	0	79
22:45	0	63	6	0	0	0	1	0	0	0	0	0	0	70
23:00	0	73	3	0	0	0	0	0	0	0	0	0	0	76
23:15	0	63	6	0	1	0	0	0	0	0	0	0	0	70
23:30	0	53	4	0	1	0	0	0	0	0	0	0	0	58
23:45	0	44	6	0	0	0	0	0	0	0	0	0	0	50
Totals	**10**	**13965**	**1904**	**38**	**236**	**29**	**1**	**16**	**1**					**16200**
% of Totals	0%	86%	12%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	5	4541	635	13	101	12	0	7	0	0	0	0	0	5314
% AM	0%	28%	4%	0%	1%	0%		0%						33%
AM Peak Hour	05:00	07:00	11:45	05:45	07:15	07:00		07:30						07:00
Volume	2	1087	131	4	25	3		2						1217
PM Volumes	5	9424	1269	25	135	17	1	9	1	0	0	0	0	10886
% PM	0%	58%	8%	0%	1%	0%	0%	0%	0%					67%
PM Peak Hour	16:00	17:15	16:30	15:00	14:45	13:30	22:00	13:00	16:45					16:45
Volume	2	1371	190	10	34	5	1	5	1					1548

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	2100	⟷	13%	1714	⟷	11%	2838	⟷	18%	9548	⟷	59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Walt Stephens Rd Bet. Flippen Rd & SR-75

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_001e

East Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	54	3	1	0	0	0	0	0	0	0	0	0	58
01:00	0	40	3	0	0	1	0	0	0	0	0	0	0	44
02:00	0	22	1	0	0	0	0	0	0	0	0	0	0	23
03:00	0	16	4	0	0	0	0	0	0	0	0	0	0	20
04:00	0	29	4	0	0	0	0	0	0	0	0	0	0	33
05:00	0	77	9	0	3	0	0	0	0	0	0	0	0	89
06:00	0	186	22	2	4	1	0	0	0	0	0	0	0	215
07:00	0	572	52	1	8	0	0	0	0	0	0	0	0	633
08:00	1	392	50	1	6	0	0	0	0	0	0	0	0	450
09:00	0	326	42	0	7	2	0	1	0	0	0	0	0	378
10:00	1	304	37	1	4	1	0	0	0	0	0	0	0	348
11:00	1	316	53	0	7	0	0	0	0	0	0	0	0	377
12:00 PM	0	337	54	0	1	1	0	0	0	0	0	0	0	393
13:00	0	375	49	0	8	2	0	2	0	0	0	0	0	436
14:00	1	491	71	1	14	2	0	0	0	0	0	0	0	580
15:00	1	528	70	6	13	2	0	0	0	0	0	0	0	620
16:00	1	569	108	3	13	0	0	0	0	0	0	0	0	694
17:00	0	768	101	1	5	1	0	0	1	0	0	0	0	877
18:00	0	621	68	0	5	1	0	0	0	0	0	0	0	695
19:00	0	422	51	0	2	0	0	1	0	0	0	0	0	476
20:00	0	267	20	0	0	1	0	0	0	0	0	0	0	288
21:00	1	248	24	0	0	0	0	0	0	0	0	0	0	273
22:00	0	151	11	1	0	0	1	0	0	0	0	0	0	164
23:00	0	107	8	0	0	0	0	0	0	0	0	0	0	115
Totals	7	7218	915	18	100	15	1	4	1					8279
% of Totals	0%	87%	11%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	3	2334	280	6	39	5	0	1	0	0	0	0	0	2668
% AM	0%	28%	3%	0%	0%	0%		0%						32%
AM Peak Hour	08:00	07:00	11:00	06:00	07:00	09:00		09:00						07:00
Volume	1	572	53	2	8	2		1						633
PM Volumes	4	4884	635	12	61	10	1	3	1	0	0	0	0	5611
% PM	0%	59%	8%	0%	1%	0%	0%	0%	0%					68%
PM Peak Hour	14:00	17:00	16:00	15:00	14:00	13:00	22:00	13:00	17:00					17:00
Volume	1	768	108	6	14	2	1	2	1					877

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1083		13%	829		10%	1571		19%	4796		58%

Classification Definitions

Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Walt Stephens Rd Bet. Flippen Rd & SR-75

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_001w

West Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	52	0	0	0	1	0	0	0	0	0	0	0	53
01:00	0	30	4	0	0	0	0	0	0	0	0	0	0	34
02:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
03:00	0	29	4	0	1	0	0	0	0	0	0	0	0	34
04:00	0	42	5	0	0	0	0	0	0	0	0	0	0	47
05:00	2	107	14	1	4	0	0	0	0	0	0	0	0	128
06:00	0	225	39	2	12	1	0	1	0	0	0	0	0	280
07:00	0	515	51	0	14	3	0	1	0	0	0	0	0	584
08:00	0	363	57	1	9	1	0	2	0	0	0	0	0	433
09:00	0	292	66	1	9	0	0	0	0	0	0	0	0	368
10:00	0	266	59	1	8	1	0	0	0	0	0	0	0	335
11:00	0	268	54	1	5	0	0	2	0	0	0	0	0	330
12:00 PM	0	351	67	0	6	1	0	2	0	0	0	0	0	427
13:00	0	386	57	1	10	1	0	3	0	0	0	0	0	458
14:00	0	416	72	2	13	1	0	1	0	0	0	0	0	505
15:00	0	424	71	4	16	0	0	0	0	0	0	0	0	515
16:00	1	511	77	4	13	2	0	0	0	0	0	0	0	608
17:00	0	586	64	0	9	0	0	0	0	0	0	0	0	659
18:00	0	525	68	1	2	0	0	0	0	0	0	0	0	596
19:00	0	473	63	0	2	0	0	0	0	0	0	0	0	538
20:00	0	330	39	0	0	0	0	0	0	0	0	0	0	369
21:00	0	260	32	1	0	1	0	0	0	0	0	0	0	294
22:00	0	152	13	0	1	1	0	0	0	0	0	0	0	167
23:00	0	126	11	0	2	0	0	0	0	0	0	0	0	139
Totals	3	6747	989	20	136	14		12						7921
% of Totals	0%	85%	12%	0%	2%	0%		0%						100%

AM Volumes	2	2207	355	7	62	7	0	6	0	0	0	0	0	2646
% AM	0%	28%	4%	0%	1%	0%		0%						33%
AM Peak Hour	05:00	07:00	09:00	06:00	07:00	07:00		08:00						07:00
Volume	2	515	66	2	14	3		2						584
PM Volumes	1	4540	634	13	74	7	0	6	0	0	0	0	0	5275
% PM	0%	57%	8%	0%	1%	0%		0%						67%
PM Peak Hour	16:00	17:00	16:00	15:00	15:00	16:00		13:00						17:00
Volume	1	586	77	4	16	2		3						659

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1017	13%	885	11%	1267	16%	4752	60%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Walt Stephens Rd Bet. Flippen Rd & SR-75

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	106	3	1	0	1	0	0	0	0	0	0	0	111
01:00	0	70	7	0	0	1	0	0	0	0	0	0	0	78
02:00	0	40	3	0	0	0	0	0	0	0	0	0	0	43
03:00	0	45	8	0	1	0	0	0	0	0	0	0	0	54
04:00	0	71	9	0	0	0	0	0	0	0	0	0	0	80
05:00	2	184	23	1	7	0	0	0	0	0	0	0	0	217
06:00	0	411	61	4	16	2	0	1	0	0	0	0	0	495
07:00	0	1087	103	1	22	3	0	1	0	0	0	0	0	1217
08:00	1	755	107	2	15	1	0	2	0	0	0	0	0	883
09:00	0	618	108	1	16	2	0	1	0	0	0	0	0	746
10:00	1	570	96	2	12	2	0	0	0	0	0	0	0	683
11:00	1	584	107	1	12	0	0	2	0	0	0	0	0	707
12:00 PM	0	688	121	0	7	2	0	2	0	0	0	0	0	820
13:00	0	761	106	1	18	3	0	5	0	0	0	0	0	894
14:00	1	907	143	3	27	3	0	1	0	0	0	0	0	1085
15:00	1	952	141	10	29	2	0	0	0	0	0	0	0	1135
16:00	2	1080	185	7	26	2	0	0	0	0	0	0	0	1302
17:00	0	1354	165	1	14	1	0	0	1	0	0	0	0	1536
18:00	0	1146	136	1	7	1	0	0	0	0	0	0	0	1291
19:00	0	895	114	0	4	0	0	1	0	0	0	0	0	1014
20:00	0	597	59	0	0	1	0	0	0	0	0	0	0	657
21:00	1	508	56	1	0	1	0	0	0	0	0	0	0	567
22:00	0	303	24	1	1	1	1	0	0	0	0	0	0	331
23:00	0	233	19	0	2	0	0	0	0	0	0	0	0	254
Totals	10	13965	1904	38	236	29	1	16	1					16200
% of Totals	0%	86%	12%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	5	4541	635	13	101	12	0	7	0	0	0	0	0	5314
% AM	0%	28%	4%	0%	1%	0%		0%						33%
AM Peak Hour	05:00	07:00	09:00	06:00	07:00	07:00		08:00						07:00
Volume	2	1087	108	4	22	3		2						1217
PM Volumes	5	9424	1269	25	135	17	1	9	1	0	0	0	0	10886
% PM	0%	58%	8%	0%	1%	0%	0%	0%	0%					67%
PM Peak Hour	16:00	17:00	16:00	15:00	15:00	13:00	22:00	13:00	17:00					17:00
Volume	2	1354	185	10	29	3	1	5	1					1536

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	2100	13%	1714	11%	2838	18%	9548	59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Flippen Rd Bet. Reeves Creek Trail & Fairhaven Rd

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_002n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
00:15	0	8	0	0	0	0	0	0	0	0	0	0	0	8
00:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
00:45	0	13	0	0	0	0	0	0	0	0	0	0	0	13
01:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
01:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	4	3	0	0	0	0	0	0	0	0	0	0	7
01:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
02:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:30	0	6	0	0	0	1	0	0	0	0	0	0	0	7
02:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
04:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:15	0	5	1	0	1	1	0	0	0	0	0	0	0	8
04:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
04:45	0	8	1	0	0	0	0	0	0	0	0	0	0	9
05:00	0	12	4	0	0	0	0	0	0	0	0	0	0	16
05:15	0	15	4	0	1	0	0	0	0	0	0	0	0	20
05:30	0	22	4	0	2	0	0	0	0	0	0	0	0	28
05:45	0	37	5	0	3	0	0	0	0	0	0	0	0	45
06:00	0	42	6	1	0	0	0	0	0	0	0	0	0	49
06:15	0	45	8	0	2	1	0	0	0	0	0	0	0	56
06:30	0	56	11	0	0	0	0	0	0	0	0	0	0	67
06:45	0	71	8	0	2	0	0	0	0	0	0	0	0	81
07:00	0	70	15	1	0	0	0	1	0	0	0	0	0	87
07:15	0	94	13	0	4	0	0	0	0	0	0	0	0	111
07:30	0	109	12	0	3	0	0	0	0	0	0	0	0	124
07:45	0	120	9	0	1	0	0	0	0	0	0	0	0	130
08:00	0	85	14	0	3	0	0	0	0	0	0	0	0	102
08:15	1	72	12	0	1	0	0	0	0	0	0	0	0	86
08:30	0	82	10	2	3	0	0	0	0	0	0	0	0	97
08:45	0	70	12	0	1	0	0	0	0	0	0	0	0	83
09:00	0	55	13	0	0	1	0	0	0	0	0	0	0	69
09:15	0	63	16	1	0	0	0	0	0	0	0	0	0	80
09:30	0	64	13	0	1	0	0	0	0	0	0	0	0	78
09:45	0	63	10	0	1	0	0	0	0	0	0	0	0	74
10:00	0	69	10	0	1	0	0	0	0	0	0	0	0	80
10:15	0	59	11	0	0	0	0	0	0	0	0	0	0	70
10:30	0	73	8	0	1	1	0	0	0	0	0	0	0	83
10:45	0	73	11	0	1	0	0	0	0	0	0	0	0	85
11:00	0	76	10	0	0	0	0	0	0	0	0	0	0	86
11:15	0	73	13	0	2	0	0	1	0	0	0	0	0	89
11:30	0	72	14	0	0	0	0	0	0	0	0	0	0	86
11:45	0	69	15	0	2	0	0	0	0	0	0	0	0	86
12:00 PM	0	54	15	0	0	0	0	0	0	0	0	0	0	69
12:15	0	82	15	0	3	0	0	0	0	0	0	0	0	100
12:30	0	66	16	0	1	0	0	0	0	0	0	0	0	83
12:45	0	73	7	1	1	1	0	0	0	0	0	0	0	83
13:00	0	83	12	0	1	0	0	0	0	0	0	0	0	96
13:15	0	59	12	0	3	0	0	0	0	0	0	0	0	74
13:30	0	77	18	0	4	0	0	0	0	0	0	0	0	99
13:45	0	79	12	1	1	0	0	0	0	0	0	0	0	93
14:00	0	72	12	0	1	0	0	0	0	0	0	0	0	85
14:15	0	76	13	0	3	0	0	0	0	0	0	0	0	92
14:30	0	91	26	0	0	0	0	0	0	0	0	0	0	117
14:45	0	100	19	0	1	1	0	0	0	0	0	0	0	121
15:00	0	93	15	1	2	0	0	0	0	0	0	0	0	111
15:15	0	93	13	0	2	1	0	1	0	0	0	0	0	110
15:30	1	89	10	0	2	0	0	0	0	0	0	0	0	102
15:45	0	97	14	1	3	0	0	0	0	0	0	0	0	115
16:00	0	110	20	0	2	1	0	0	0	0	0	0	0	133
16:15	1	111	17	0	5	0	0	1	0	0	0	0	0	135
16:30	3	81	15	1	1	1	0	0	0	0	0	0	0	102
16:45	0	100	19	0	3	0	0	1	0	0	0	0	0	123
17:00	0	104	13	1	1	0	0	0	0	0	0	0	0	119
17:15	0	94	18	0	0	0	0	0	0	0	0	0	0	112
17:30	0	124	22	0	2	0	0	0	0	0	0	0	0	148
17:45	0	113	8	1	2	1	0	0	0	0	0	0	0	125
18:00	1	127	12	1	2	0	0	0	0	0	0	0	0	143
18:15	0	119	21	0	1	0	0	0	0	0	0	0	0	141
18:30	0	94	10	0	3	0	0	0	0	0	0	0	0	107
18:45	0	93	19	0	2	0	0	1	0	0	0	0	0	115
19:00	0	84	7	0	0	0	0	0	0	0	0	0	0	91
19:15	0	62	9	0	0	0	0	0	0	0	0	0	0	71
19:30	0	71	7	1	0	0	0	0	0	0	0	0	0	79
19:45	0	59	10	0	0	0	0	0	0	0	0	0	0	69
20:00	0	59	12	0	1	0	0	0	0	0	0	0	0	72
20:15	0	63	6	0	1	1	0	0	0	0	0	0	0	71
20:30	0	45	6	0	0	0	0	0	0	0	0	0	0	51
20:45	0	50	5	0	0	0	0	0	0	0	0	0	0	55
21:00	0	42	8	0	0	0	0	0	0	0	0	0	0	50
21:15	0	38	4	0	0	0	0	0	0	0	0	0	0	42
21:30	0	37	6	0	2	0	0	0	0	0	0	0	0	45
21:45	0	36	3	0	0	0	0	0	0	0	0	0	0	39
22:00	0	28	3	0	0	0	0	0	0	0	0	0	0	31
22:15	0	22	3	0	0	0	0	0	0	0	0	0	0	25
22:30	0	27	3	0	0	0	0	0	0	0	0	0	0	30
22:45	0	16	4	0	0	0	0	0	0	0	0	0	0	20
23:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
23:15	0	21	5	0	0	0	0	0	0	0	0	0	0	26
23:30	0	14	1	0	0	0	0	0	0	0	0	0	0	15
23:45	0	14	2	0	0	0	0	0	0	0	0	0	0	16
Totals	**7**	**5282**	**836**	**14**	**92**	**12**		**6**						**6249**
% of Totals	0%	85%	13%	0%	1%	0%		0%						100%

AM Volumes	1	1922	307	5	36	5	0	2	0	0	0	0	0	2278
% AM	0%	31%	5%	0%	1%	0%		0%						36%
AM Peak Hour	07:30	07:15	11:45	08:30	07:15	01:45		06:15						07:15
Volume	1	408	61	3	11	1		1						467
PM Volumes	6	3360	529	9	56	7	0	4	0	0	0	0	0	3971
% PM	0%	54%	8%	0%	1%	0%		0%						64%
PM Peak Hour	15:45	17:30	14:15	15:00	15:30	14:30		16:00						17:30
Volume	4	483	73	2	12	2		2						557

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	820	⟷	13%	697	⟷	11%	997	⟷	16%	3735	⟷	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Flippen Rd Bet. Reeves Creek Trail & Fairhaven Rd

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_002s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
00:15	0	15	0	0	0	0	0	0	0	0	0	0	0	15
00:30	0	11	0	0	0	0	0	0	0	0	0	0	0	11
00:45	0	11	0	0	0	0	0	0	0	0	0	0	0	11
01:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
01:15	0	5	0	0	0	0	0	1	0	0	0	0	0	6
01:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
01:45	0	9	0	0	0	0	0	0	0	0	0	0	0	9
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
04:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
04:45	0	3	3	0	1	0	0	0	0	0	0	0	0	7
05:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
05:15	0	15	3	0	0	0	0	0	0	0	0	0	0	18
05:30	0	17	1	0	1	0	0	0	0	0	0	0	0	19
05:45	0	22	2	1	1	0	0	0	0	0	0	0	0	26
06:00	0	16	3	0	4	1	0	0	0	0	0	0	0	24
06:15	0	23	4	0	3	0	0	1	0	0	0	0	0	31
06:30	0	35	5	1	0	1	0	0	0	0	0	0	0	42
06:45	0	50	4	0	1	0	0	0	0	0	0	0	0	55
07:00	1	56	12	0	2	1	0	0	0	0	0	0	0	72
07:15	0	80	7	0	4	0	0	0	0	0	0	0	0	91
07:30	0	80	11	0	2	0	0	0	0	0	0	0	0	93
07:45	1	83	10	0	2	0	0	1	0	0	0	0	0	97
08:00	0	58	8	0	3	0	0	1	0	0	0	0	0	70
08:15	0	55	10	1	1	0	0	0	0	0	0	0	0	67
08:30	0	71	8	0	1	0	0	0	0	0	0	0	0	80
08:45	0	78	12	0	2	0	0	0	0	0	0	0	0	92
09:00	0	49	10	0	2	0	0	0	0	0	0	0	0	61
09:15	0	59	14	0	0	0	0	0	0	0	0	0	0	73
09:30	0	69	14	0	2	0	0	0	0	0	0	0	0	85
09:45	1	68	14	1	1	0	0	0	0	0	0	0	0	85
10:00	0	47	11	0	6	0	0	0	0	0	0	0	0	64
10:15	1	72	12	1	2	0	0	0	0	0	0	0	0	88
10:30	0	79	18	0	1	0	0	0	0	0	0	0	0	98
10:45	0	83	14	0	2	0	0	0	0	0	0	0	0	99
11:00	0	74	17	0	1	0	0	1	0	0	0	0	0	93
11:15	0	79	13	0	6	0	0	0	0	0	0	0	0	98
11:30	0	62	18	1	2	0	0	1	0	0	0	0	0	84
11:45	0	80	20	0	2	0	0	0	0	0	0	0	0	102
12:00 PM	0	83	23	0	4	0	0	1	0	0	0	0	0	111
12:15	0	83	15	0	3	0	0	0	0	0	0	0	0	101
12:30	0	75	16	0	1	0	0	1	0	0	0	0	0	93
12:45	0	73	17	0	1	0	0	0	0	0	0	0	0	91
13:00	0	83	16	0	2	0	0	0	0	0	0	0	0	101
13:15	0	86	11	0	1	0	0	0	0	0	0	0	0	98
13:30	0	83	14	0	1	0	0	0	0	0	0	0	0	98
13:45	0	80	24	1	4	0	0	4	0	0	0	0	0	113
14:00	0	107	19	0	2	1	0	0	0	0	0	0	0	129
14:15	0	89	17	0	0	0	0	0	0	0	0	0	0	106
14:30	0	100	9	2	1	0	0	0	0	0	0	0	0	112
14:45	0	103	20	0	3	0	0	0	0	0	0	0	0	126
15:00	0	90	23	0	5	1	0	0	0	0	0	0	0	119
15:15	1	108	23	1	0	1	0	0	0	0	0	0	0	134
15:30	0	104	15	0	3	0	0	0	0	0	0	0	0	122
15:45	0	128	13	1	5	0	0	0	0	0	0	0	0	147
16:00	1	106	18	0	0	0	0	0	0	0	0	0	0	125
16:15	0	136	19	1	5	0	0	0	0	0	0	0	0	161
16:30	1	120	14	1	1	0	0	0	0	0	0	0	0	137
16:45	1	122	22	0	4	0	0	0	0	0	0	0	0	149
17:00	0	147	18	0	1	1	0	0	0	0	0	0	0	167
17:15	0	154	27	0	3	0	0	0	0	0	0	0	0	184
17:30	0	172	18	1	2	0	0	0	0	0	0	0	0	193
17:45	0	155	14	0	1	0	0	0	0	0	0	0	0	170
18:00	0	149	20	0	2	0	0	0	0	0	0	0	0	171
18:15	0	133	16	0	5	0	0	0	0	0	0	0	0	154
18:30	0	121	15	0	0	0	0	0	0	0	0	0	0	136
18:45	0	109	14	0	0	0	0	0	0	0	0	0	0	123
19:00	0	95	16	0	1	0	0	0	0	0	0	0	0	112
19:15	0	118	12	0	1	0	0	0	0	0	0	0	0	131
19:30	0	87	15	0	1	0	0	0	0	0	0	0	0	103
19:45	0	78	8	0	0	0	0	0	0	0	0	0	0	86
20:00	0	67	11	0	1	0	0	0	0	0	0	0	0	79
20:15	0	68	7	0	1	0	0	0	0	0	0	0	0	76
20:30	0	60	5	0	1	0	0	0	0	0	0	0	0	66
20:45	0	49	6	0	0	0	0	0	0	0	0	0	0	55
21:00	0	51	8	0	0	0	0	0	0	0	0	0	0	59
21:15	0	46	3	0	1	0	0	0	0	0	0	0	0	50
21:30	0	36	5	0	0	0	0	0	0	0	0	0	0	41
21:45	0	48	3	0	0	0	0	0	0	0	0	0	0	51
22:00	0	30	2	0	0	0	0	0	0	0	0	0	0	32
22:15	0	22	1	0	0	0	0	0	0	0	0	0	0	23
22:30	0	25	1	0	1	0	0	0	0	0	0	0	0	27
22:45	0	29	2	0	0	0	0	0	0	0	0	0	0	31
23:00	0	24	0	0	1	0	0	0	0	0	0	0	0	25
23:15	0	27	2	0	0	0	0	0	0	0	0	0	0	29
23:30	0	20	3	0	0	0	0	1	0	0	0	0	0	24
23:45	0	19	3	0	0	0	0	0	0	0	0	0	0	22
Totals	**8**	**5770**	**887**	**14**	**124**	**7**		**13**						**6823**
% of Totals	0%	85%	13%	0%	2%	0%		0%						100%

AM Volumes	4	1672	284	6	55	3	0	6	0	0	0	0	0	2030
% AM	0%	25%	4%	0%	1%	0%		0%						30%
AM Peak Hour	07:00	11:45	11:30	05:45	11:15	05:45		07:15						11:45
Volume	2	321	76	2	14	2		2						407
PM Volumes	4	4098	603	8	69	4	0	7	0	0	0	0	0	4793
% PM	0%	60%	9%	0%	1%	0%		0%						70%
PM Peak Hour	16:00	17:15	16:45	13:45	15:00	14:30		13:00						17:15
Volume	3	630	85	3	13	2		4						718

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	662	⟷	10%	806	⟷	12%	1286	⟷	19%	4069	⟷	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
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5 2-Axle, 6-Tire Single Units
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7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
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10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Flippen Rd Bet. Reeves Creek Trail & Fairhaven Rd

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	22	2	0	0	0	0	0	0	0	0	0	0	24
00:15	0	23	0	0	0	0	0	0	0	0	0	0	0	23
00:30	0	17	1	0	0	0	0	0	0	0	0	0	0	18
00:45	0	24	0	0	0	0	0	0	0	0	0	0	0	24
01:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
01:15	0	12	0	0	0	0	0	1	0	0	0	0	0	13
01:30	0	8	4	0	0	0	0	0	0	0	0	0	0	12
01:45	0	14	1	0	0	0	0	0	0	0	0	0	0	15
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
02:15	0	2	2	0	0	0	0	0	0	0	0	0	0	4
02:30	0	7	0	0	0	1	0	0	0	0	0	0	0	8
02:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
03:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6
03:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10
04:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
04:15	0	8	1	0	1	1	0	0	0	0	0	0	0	11
04:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
04:45	0	11	4	0	1	0	0	0	0	0	0	0	0	16
05:00	0	20	5	0	0	0	0	0	0	0	0	0	0	25
05:15	0	30	7	0	1	0	0	0	0	0	0	0	0	38
05:30	0	39	5	0	3	0	0	0	0	0	0	0	0	47
05:45	0	59	7	1	4	0	0	0	0	0	0	0	0	71
06:00	0	58	9	1	4	1	0	0	0	0	0	0	0	73
06:15	0	68	12	0	5	1	0	1	0	0	0	0	0	87
06:30	0	91	16	1	0	1	0	0	0	0	0	0	0	109
06:45	0	121	12	0	3	0	0	0	0	0	0	0	0	136
07:00	1	126	27	1	2	1	0	1	0	0	0	0	0	159
07:15	0	174	20	0	8	0	0	0	0	0	0	0	0	202
07:30	0	189	23	0	5	0	0	0	0	0	0	0	0	217
07:45	1	203	19	0	3	0	0	1	0	0	0	0	0	227
08:00	0	143	22	0	6	0	0	1	0	0	0	0	0	172
08:15	1	127	22	1	2	0	0	0	0	0	0	0	0	153
08:30	0	153	18	2	4	0	0	0	0	0	0	0	0	177
08:45	0	148	24	0	3	0	0	0	0	0	0	0	0	175
09:00	0	104	23	0	2	1	0	0	0	0	0	0	0	130
09:15	0	122	30	1	0	0	0	0	0	0	0	0	0	153
09:30	0	133	27	0	3	0	0	0	0	0	0	0	0	163
09:45	1	131	24	1	2	0	0	0	0	0	0	0	0	159
10:00	0	116	21	0	7	0	0	0	0	0	0	0	0	144
10:15	1	131	23	1	2	0	0	0	0	0	0	0	0	158
10:30	0	152	26	0	2	1	0	0	0	0	0	0	0	181
10:45	0	156	25	0	3	0	0	0	0	0	0	0	0	184
11:00	0	150	27	0	1	0	0	1	0	0	0	0	0	179
11:15	0	152	26	0	8	0	0	1	0	0	0	0	0	187
11:30	0	134	32	1	2	0	0	1	0	0	0	0	0	170
11:45	0	149	35	0	4	0	0	0	0	0	0	0	0	188
12:00 PM	0	137	38	0	4	0	0	1	0	0	0	0	0	180
12:15	0	165	30	0	6	0	0	0	0	0	0	0	0	201
12:30	0	141	32	0	2	0	0	1	0	0	0	0	0	176
12:45	0	146	24	1	2	1	0	0	0	0	0	0	0	174
13:00	0	166	28	0	3	0	0	0	0	0	0	0	0	197
13:15	0	145	23	0	4	0	0	0	0	0	0	0	0	172
13:30	0	160	32	0	5	0	0	0	0	0	0	0	0	197
13:45	0	159	36	2	5	0	0	4	0	0	0	0	0	206
14:00	0	179	31	0	3	1	0	0	0	0	0	0	0	214
14:15	0	165	30	0	3	0	0	0	0	0	0	0	0	198
14:30	0	191	35	2	1	0	0	0	0	0	0	0	0	229
14:45	0	203	39	0	4	1	0	0	0	0	0	0	0	247
15:00	0	183	38	1	7	1	0	0	0	0	0	0	0	230
15:15	1	201	36	1	2	2	0	1	0	0	0	0	0	244
15:30	1	193	25	0	5	0	0	0	0	0	0	0	0	224
15:45	0	225	27	2	8	0	0	0	0	0	0	0	0	262
16:00	1	216	38	0	2	1	0	0	0	0	0	0	0	258
16:15	1	247	36	1	10	0	0	1	0	0	0	0	0	296
16:30	4	201	29	2	2	1	0	0	0	0	0	0	0	239
16:45	1	222	41	0	7	0	0	1	0	0	0	0	0	272
17:00	0	251	31	1	2	1	0	0	0	0	0	0	0	286
17:15	0	248	45	0	3	0	0	0	0	0	0	0	0	296
17:30	0	296	40	1	4	0	0	0	0	0	0	0	0	341
17:45	0	268	22	1	3	1	0	0	0	0	0	0	0	295
18:00	1	276	32	1	4	0	0	0	0	0	0	0	0	314
18:15	0	252	37	0	6	0	0	0	0	0	0	0	0	295
18:30	0	215	25	0	3	0	0	0	0	0	0	0	0	243
18:45	0	202	33	0	2	0	0	1	0	0	0	0	0	238
19:00	0	179	23	0	1	0	0	0	0	0	0	0	0	203
19:15	0	180	21	0	1	0	0	0	0	0	0	0	0	202
19:30	0	158	22	1	1	0	0	0	0	0	0	0	0	182
19:45	0	137	18	0	0	0	0	0	0	0	0	0	0	155
20:00	0	126	23	0	2	0	0	0	0	0	0	0	0	151
20:15	0	131	13	0	2	1	0	0	0	0	0	0	0	147
20:30	0	105	11	0	1	0	0	0	0	0	0	0	0	117
20:45	0	99	11	0	0	0	0	0	0	0	0	0	0	110
21:00	0	93	16	0	0	0	0	0	0	0	0	0	0	109
21:15	0	84	7	0	1	0	0	0	0	0	0	0	0	92
21:30	0	73	11	0	2	0	0	0	0	0	0	0	0	86
21:45	0	84	6	0	0	0	0	0	0	0	0	0	0	90
22:00	0	58	5	0	0	0	0	0	0	0	0	0	0	63
22:15	0	44	4	0	0	0	0	0	0	0	0	0	0	48
22:30	0	52	4	0	1	0	0	0	0	0	0	0	0	57
22:45	0	45	6	0	0	0	0	0	0	0	0	0	0	51
23:00	0	42	2	0	1	0	0	0	0	0	0	0	0	45
23:15	0	48	7	0	0	0	0	0	0	0	0	0	0	55
23:30	0	34	4	0	0	0	0	1	0	0	0	0	0	39
23:45	0	33	5	0	0	0	0	0	0	0	0	0	0	38
Totals	15	11052	1723	28	216	19		19						13072
% of Totals	0%	85%	13%	0%	2%	0%		0%						100%

AM Volumes	5	3594	591	11	91	8	0	8	0	0	0	0	0	4308
% AM	0%	27%	5%	0%	1%	0%		0%						33%
AM Peak Hour	07:00	07:15	11:30	05:45	07:15	05:45		10:45						07:15
Volume	2	709	135	3	22	3		3						818
PM Volumes	10	7458	1132	17	125	11	0	11	0	0	0	0	0	8764
% PM	0%	57%	9%	0%	1%	0%		0%						67%
PM Peak Hour	16:00	17:30	16:45	15:45	15:30	14:30		13:00						17:15
Volume	7	1092	157	5	25	4		4						1246

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	1482	⟷	11%	1503	⟷	11%	2283	⟷	17%	7804	⟷	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Flippen Rd Bet. Reeves Creek Trail & Fairhaven Rd

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_002n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	40	3	0	0	0	0	0	0	0	0	0	0	43
01:00	0	23	6	0	0	0	0	0	0	0	0	0	0	29
02:00	0	13	3	0	0	1	0	0	0	0	0	0	0	17
03:00	0	14	2	0	0	0	0	0	0	0	0	0	0	16
04:00	0	21	2	0	1	1	0	0	0	0	0	0	0	25
05:00	0	86	17	0	6	0	0	0	0	0	0	0	0	109
06:00	0	214	33	1	4	1	0	0	0	0	0	0	0	253
07:00	0	393	49	1	8	0	0	1	0	0	0	0	0	452
08:00	1	309	48	2	8	0	0	0	0	0	0	0	0	368
09:00	0	245	52	1	2	1	0	0	0	0	0	0	0	301
10:00	0	274	40	0	3	1	0	0	0	0	0	0	0	318
11:00	0	290	52	0	4	0	0	1	0	0	0	0	0	347
12:00 PM	0	275	53	1	5	1	0	0	0	0	0	0	0	335
13:00	0	298	54	1	9	0	0	0	0	0	0	0	0	362
14:00	0	339	70	0	5	1	0	0	0	0	0	0	0	415
15:00	1	372	52	2	9	1	0	1	0	0	0	0	0	438
16:00	4	402	71	1	11	2	0	2	0	0	0	0	0	493
17:00	0	435	61	2	5	1	0	0	0	0	0	0	0	504
18:00	1	433	62	1	8	0	0	1	0	0	0	0	0	506
19:00	0	276	33	1	0	0	0	0	0	0	0	0	0	310
20:00	0	217	29	0	2	1	0	0	0	0	0	0	0	249
21:00	0	153	21	0	2	0	0	0	0	0	0	0	0	176
22:00	0	93	13	0	0	0	0	0	0	0	0	0	0	106
23:00	0	67	10	0	0	0	0	0	0	0	0	0	0	77
Totals	7	5282	836	14	92	12		6						6249
% of Totals	0%	85%	13%	0%	1%	0%		0%						100%

AM Volumes	1	1922	307	5	36	5	0	2	0	0	0	0	0	2278
% AM	0%	31%	5%	0%	1%	0%		0%						36%
AM Peak Hour	08:00	07:00	09:00	08:00	07:00	02:00		07:00						07:00
Volume	1	393	52	2	8	1		1						452
PM Volumes	6	3360	529	9	56	7	0	4	0	0	0	0	0	3971
% PM	0%	54%	8%	0%	1%	0%		0%						64%
PM Peak Hour	16:00	17:00	16:00	15:00	16:00	16:00		16:00						18:00
Volume	4	435	71	2	11	2		2						506

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	820	13%	697	11%	997	16%	3735	60%

Classification Definitions

Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Flippen Rd Bet. Reeves Creek Trail & Fairhaven Rd

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_002s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	46	0	0	0	0	0	0	0	0	0	0	0	46
01:00	0	23	1	0	0	0	0	1	0	0	0	0	0	25
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
04:00	0	19	5	0	1	0	0	0	0	0	0	0	0	25
05:00	0	62	7	1	2	0	0	0	0	0	0	0	0	72
06:00	0	124	16	1	8	2	0	1	0	0	0	0	0	152
07:00	2	299	40	0	10	1	0	1	0	0	0	0	0	353
08:00	0	262	38	1	7	0	0	1	0	0	0	0	0	309
09:00	1	245	52	1	5	0	0	0	0	0	0	0	0	304
10:00	1	281	55	1	11	0	0	0	0	0	0	0	0	349
11:00	0	295	68	1	11	0	0	2	0	0	0	0	0	377
12:00 PM	0	314	71	0	9	0	0	2	0	0	0	0	0	396
13:00	0	332	65	1	8	0	0	4	0	0	0	0	0	410
14:00	0	399	65	2	6	1	0	0	0	0	0	0	0	473
15:00	1	430	74	2	13	2	0	0	0	0	0	0	0	522
16:00	3	484	73	2	10	0	0	0	0	0	0	0	0	572
17:00	0	628	77	1	7	1	0	0	0	0	0	0	0	714
18:00	0	512	65	0	7	0	0	0	0	0	0	0	0	584
19:00	0	378	51	0	3	0	0	0	0	0	0	0	0	432
20:00	0	244	29	0	3	0	0	0	0	0	0	0	0	276
21:00	0	181	19	0	1	0	0	0	0	0	0	0	0	201
22:00	0	106	6	0	1	0	0	0	0	0	0	0	0	113
23:00	0	90	8	0	1	0	0	1	0	0	0	0	0	100
Totals	8	5770	887	14	124	7		13						6823
% of Totals	0%	85%	13%	0%	2%	0%		0%						100%

AM Volumes	4	1672	284	6	55	3	0	6	0	0	0	0	0	2030
% AM	0%	25%	4%	0%	1%	0%		0%						30%
AM Peak Hour	07:00	07:00	11:00	05:00	10:00	06:00		11:00						11:00
Volume	2	299	68	1	11	2		2						377
PM Volumes	4	4098	603	8	69	4	0	7	0	0	0	0	0	4793
% PM	0%	60%	9%	0%	1%	0%		0%						70%
PM Peak Hour	16:00	17:00	17:00	14:00	15:00	15:00		13:00						17:00
Volume	3	628	77	2	13	2		4						714

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	662	10%	806	12%	1286	19%	4069	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Flippen Rd Bet. Reeves Creek Trail & Fairhaven Rd

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	86	3	0	0	0	0	0	0	0	0	0	0	89
01:00	0	46	7	0	0	0	0	1	0	0	0	0	0	54
02:00	0	18	4	0	0	1	0	0	0	0	0	0	0	23
03:00	0	25	3	0	0	0	0	0	0	0	0	0	0	28
04:00	0	40	7	0	2	1	0	0	0	0	0	0	0	50
05:00	0	148	24	1	8	0	0	0	0	0	0	0	0	181
06:00	0	338	49	2	12	3	0	1	0	0	0	0	0	405
07:00	2	692	89	1	18	1	0	2	0	0	0	0	0	805
08:00	1	571	86	3	15	0	0	1	0	0	0	0	0	677
09:00	1	490	104	2	7	1	0	0	0	0	0	0	0	605
10:00	1	555	95	1	14	1	0	0	0	0	0	0	0	667
11:00	0	585	120	1	15	0	0	3	0	0	0	0	0	724
12:00 PM	0	589	124	1	14	1	0	2	0	0	0	0	0	731
13:00	0	630	119	2	17	0	0	4	0	0	0	0	0	772
14:00	0	738	135	2	11	2	0	0	0	0	0	0	0	888
15:00	2	802	126	4	22	3	0	1	0	0	0	0	0	960
16:00	7	886	144	3	21	2	0	2	0	0	0	0	0	1065
17:00	0	1063	138	3	12	2	0	0	0	0	0	0	0	1218
18:00	1	945	127	1	15	0	0	1	0	0	0	0	0	1090
19:00	0	654	84	1	3	0	0	0	0	0	0	0	0	742
20:00	0	461	58	0	5	1	0	0	0	0	0	0	0	525
21:00	0	334	40	0	3	0	0	0	0	0	0	0	0	377
22:00	0	199	19	0	1	0	0	0	0	0	0	0	0	219
23:00	0	157	18	0	1	0	0	1	0	0	0	0	0	177
Totals	15	11052	1723	28	216	19		19						13072
% of Totals	0%	85%	13%	0%	2%	0%		0%						100%

AM Volumes	5	3594	591	11	91	8	0	8	0	0	0	0	0	4308
% AM	0%	27%	5%	0%	1%	0%		0%						33%
AM Peak Hour	07:00	07:00	11:00	08:00	07:00	06:00		11:00						07:00
Volume	2	692	120	3	18	3		3						805
PM Volumes	10	7458	1132	17	125	11	0	11	0	0	0	0	0	8764
% PM	0%	57%	9%	0%	1%	0%		0%						67%
PM Peak Hour	16:00	17:00	16:00	15:00	15:00	15:00		13:00						17:00
Volume	7	1063	144	4	22	3		4						1218

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1482 ⟷	11%	1503 ⟷	11%	2283 ⟷	17%	7804 ⟷	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Spivey Rd Bet. Shaw Ln & Spivey Ridge Cir

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_003n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
00:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
00:30	0	0	1	0	0	0	0	0	0	0	0	0	0	1
00:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
01:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
04:15	0	3	2	0	0	0	0	0	0	0	0	0	0	5
04:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
04:45	0	7	1	0	0	0	0	0	0	0	0	0	0	8
05:00	0	8	3	0	0	0	0	0	0	0	0	0	0	11
05:15	0	15	3	0	0	0	0	0	0	0	0	0	0	18
05:30	0	16	8	0	2	0	0	0	0	0	0	0	0	26
05:45	0	12	3	0	1	0	0	0	0	0	0	0	0	16
06:00	0	22	6	0	1	0	0	0	0	0	0	0	0	29
06:15	0	28	2	0	0	0	0	0	0	0	0	0	0	30
06:30	0	38	6	0	0	0	0	0	0	0	0	0	0	44
06:45	0	33	10	0	2	0	0	0	0	0	0	0	0	45
07:00	0	41	7	0	0	0	0	0	0	0	0	0	0	48
07:15	0	45	4	0	0	0	0	0	0	0	0	0	0	49
07:30	0	73	7	0	2	0	0	0	0	0	0	0	0	82
07:45	0	49	3	0	1	0	0	0	0	0	0	0	0	53
08:00	0	44	4	2	2	0	0	0	0	0	0	0	0	52
08:15	0	22	10	2	0	0	0	0	0	0	0	0	0	34
08:30	0	34	1	0	0	0	0	0	0	0	0	0	0	35
08:45	0	27	5	0	1	0	0	0	0	0	0	0	0	33
09:00	0	26	4	0	2	0	0	0	0	0	0	0	0	32
09:15	0	31	5	0	1	0	0	1	0	0	0	0	0	38
09:30	0	26	6	0	1	0	0	1	0	0	0	0	0	34
09:45	0	25	8	0	0	0	0	0	0	0	0	0	0	33
10:00	0	28	6	0	1	0	0	0	0	0	0	0	0	35
10:15	0	26	5	0	2	0	0	0	0	0	0	0	0	33
10:30	0	25	5	0	0	0	0	0	0	0	0	0	0	30
10:45	0	26	3	0	2	0	0	0	0	0	0	0	0	31
11:00	0	16	6	0	0	0	0	0	0	0	0	0	0	22
11:15	0	23	8	0	1	0	0	0	0	0	0	0	0	32
11:30	0	21	8	0	0	0	0	0	0	0	0	0	0	29
11:45	0	23	1	0	4	0	0	0	0	0	0	0	0	28
12:00 PM	0	23	3	0	1	0	0	0	0	0	0	0	0	27
12:15	0	19	4	0	0	0	0	0	0	0	0	0	0	23
12:30	0	23	2	0	0	0	0	0	0	0	0	0	0	25
12:45	0	23	10	0	1	0	0	0	0	0	0	0	0	34
13:00	0	24	3	0	0	0	0	0	0	0	0	0	0	27
13:15	0	20	5	0	0	0	0	1	0	0	0	0	0	26
13:30	0	20	3	0	0	0	0	0	0	0	0	0	0	23
13:45	0	20	4	0	1	0	0	0	0	0	0	0	0	25
14:00	0	14	7	0	0	0	0	0	0	0	0	0	0	21
14:15	0	17	2	0	1	0	0	0	0	0	0	0	0	20
14:30	0	22	6	0	1	0	0	0	0	0	0	0	0	29
14:45	0	32	4	0	1	0	0	0	0	0	0	0	0	37
15:00	0	19	3	0	0	0	0	0	0	0	0	0	0	22
15:15	0	32	5	0	2	0	0	0	0	0	0	0	0	39
15:30	0	20	3	0	0	0	0	0	0	0	0	0	0	23
15:45	0	40	3	0	2	0	0	0	0	0	0	0	0	45
16:00	0	20	4	0	0	0	0	0	0	0	0	0	0	24
16:15	0	27	5	0	0	0	0	0	0	0	0	0	0	32
16:30	0	21	6	2	1	0	0	0	0	0	0	0	0	30
16:45	0	28	4	1	0	0	0	0	0	0	0	0	0	33
17:00	0	24	7	0	0	0	0	0	0	0	0	0	0	31
17:15	0	34	8	0	0	0	0	0	0	0	0	0	0	42
17:30	0	28	4	0	0	0	0	0	0	0	0	0	0	32
17:45	0	26	8	0	0	0	0	0	0	0	0	0	0	34
18:00	0	20	11	0	1	0	0	0	0	0	0	0	0	32
18:15	0	25	3	0	1	0	0	0	0	0	0	0	0	29
18:30	0	27	6	0	0	0	0	0	0	0	0	0	0	33
18:45	0	31	2	0	0	0	0	0	0	0	0	0	0	33
19:00	0	24	5	0	0	0	0	0	0	0	0	0	0	29
19:15	0	23	6	0	0	0	0	0	0	0	0	0	0	29
19:30	0	16	6	0	0	0	0	0	0	0	0	0	0	22
19:45	0	17	3	0	0	0	0	0	0	0	0	0	0	20
20:00	0	12	3	0	1	0	0	0	0	0	0	0	0	16
20:15	0	29	3	0	0	0	0	0	0	0	0	0	0	32
20:30	0	26	0	0	0	0	0	0	0	0	0	0	0	26
20:45	0	12	0	0	0	0	0	0	0	0	0	0	0	12
21:00	0	17	0	0	0	0	0	0	0	0	0	0	0	17
21:15	0	15	1	0	1	0	0	0	0	0	0	0	0	17
21:30	0	9	3	0	0	0	0	0	0	0	0	0	0	12
21:45	0	12	2	0	0	0	0	0	0	0	0	0	0	14
22:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
22:15	0	9	2	0	0	0	0	0	0	0	0	0	0	11
22:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
22:45	0	11	0	0	0	0	0	0	0	0	0	0	0	11
23:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
23:15	0	5	3	0	0	0	0	0	0	0	0	0	0	8
23:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6
23:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
Totals		**1797**	**331**	**7**	**41**			**3**						**2179**
% of Totals		82%	15%	0%	2%			0%						100%

AM Volumes	0	850	157	4	26	0	0	2	0	0	0	0	0	1039
% AM		39%	7%	0%	1%			0%						48%
AM Peak Hour		07:15	06:45	07:30	11:15			08:45						07:15
Volume		211	28	4	6			2						236
PM Volumes	0	947	174	3	15	0	0	1	0	0	0	0	0	1140
% PM		43%	8%	0%	1%			0%						52%
PM Peak Hour		16:45	17:15	16:00	14:30			12:30						17:15
Volume		114	31	3	4			1						140

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	386		18%	210		10%	258		12%	1325		61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Spivey Rd Bet. Shaw Ln & Spivey Ridge Cir

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_003s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
00:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
00:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
00:45	0	2	1	0	1	0	0	0	0	0	0	0	0	4
01:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
01:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
01:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
01:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
02:15	0	5	2	0	0	0	0	0	0	0	0	0	0	7
02:30	0	2	1	0	1	0	0	0	0	0	0	0	0	4
02:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
05:30	0	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
06:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
06:15	0	6	2	0	0	0	0	0	0	0	0	0	0	8
06:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
06:45	0	13	2	0	0	0	0	0	0	0	0	0	0	15
07:00	0	14	4	0	2	0	0	0	0	0	0	0	0	20
07:15	0	21	2	0	2	0	0	0	0	0	0	0	0	25
07:30	0	31	3	0	0	0	0	0	0	0	0	0	0	34
07:45	1	16	7	0	0	0	0	0	0	0	0	0	0	24
08:00	0	16	3	0	3	0	0	0	0	0	0	0	0	22
08:15	0	15	1	0	3	0	0	0	0	0	0	0	0	19
08:30	0	15	5	1	0	0	0	0	0	0	0	0	0	21
08:45	0	8	7	0	2	0	0	1	0	0	0	0	0	18
09:00	0	9	6	0	1	0	0	0	0	0	0	0	0	16
09:15	0	19	5	0	2	0	0	0	0	0	0	0	0	26
09:30	0	19	6	0	0	0	0	0	0	0	0	0	0	25
09:45	0	17	4	0	1	0	0	0	0	0	0	0	0	22
10:00	0	16	7	0	2	0	0	0	0	0	0	0	0	25
10:15	0	19	4	0	0	0	0	0	0	0	0	0	0	23
10:30	0	18	1	0	1	0	0	0	0	0	0	0	0	20
10:45	0	13	4	0	0	0	0	0	0	0	0	0	0	17
11:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
11:15	0	26	5	0	1	0	0	0	0	0	0	0	0	32
11:30	0	21	8	0	0	0	0	1	0	0	0	0	0	30
11:45	0	17	6	0	2	0	0	0	0	0	0	0	0	25
12:00 PM	0	12	3	1	1	0	0	0	0	0	0	0	0	17
12:15	0	37	6	0	2	0	0	0	0	0	0	0	0	45
12:30	0	20	2	0	1	0	0	0	0	0	0	0	0	23
12:45	0	36	6	0	2	0	0	1	0	0	0	0	0	45
13:00	0	26	10	0	1	0	0	0	0	0	0	0	0	37
13:15	2	24	13	0	0	0	0	0	0	0	0	0	0	39
13:30	0	32	9	0	1	1	0	0	0	0	0	0	0	43
13:45	0	35	9	0	3	0	0	0	0	0	0	0	0	47
14:00	0	40	6	0	2	1	0	0	0	0	0	0	0	49
14:15	0	26	5	0	2	0	0	0	0	0	0	0	0	33
14:30	0	30	8	0	1	0	0	0	0	0	0	0	0	39
14:45	0	35	7	0	1	0	0	0	0	0	0	0	0	43
15:00	0	25	8	0	1	0	0	0	0	0	0	0	0	34
15:15	0	49	8	0	3	0	0	0	0	0	0	0	0	60
15:30	0	28	7	0	0	0	0	0	0	0	0	0	0	35
15:45	0	35	8	0	0	0	0	0	0	0	0	0	0	43
16:00	0	34	12	0	0	0	0	0	0	0	0	0	0	46
16:15	0	35	11	1	1	0	0	0	0	0	0	0	0	48
16:30	0	43	6	0	3	0	0	0	0	0	0	0	0	52
16:45	0	35	2	0	1	0	0	0	0	0	0	0	0	38
17:00	0	41	15	0	0	0	0	0	0	0	0	0	0	56
17:15	0	48	14	0	3	0	0	0	0	0	0	0	0	65
17:30	0	59	11	0	0	0	0	0	0	0	0	0	0	70
17:45	1	53	11	0	1	0	0	0	0	0	0	0	0	66
18:00	1	59	9	0	2	0	0	0	0	0	0	0	0	71
18:15	0	41	11	0	1	0	0	0	0	0	0	0	0	53
18:30	0	49	6	0	2	0	0	0	0	0	0	0	0	57
18:45	0	40	7	0	0	0	0	0	0	0	0	0	0	47
19:00	0	47	5	0	1	0	0	0	0	0	0	0	0	53
19:15	0	28	10	0	0	0	0	0	0	0	0	0	0	38
19:30	0	29	8	0	1	0	0	0	0	0	0	0	0	38
19:45	0	36	3	0	1	0	0	0	0	0	0	0	0	40
20:00	0	36	6	0	2	0	0	0	0	0	0	0	0	44
20:15	0	23	1	0	0	0	0	0	0	0	0	0	0	24
20:30	0	22	5	0	0	0	0	0	0	0	0	0	0	27
20:45	0	31	6	0	1	0	0	0	0	0	0	0	0	38
21:00	0	31	5	0	1	0	0	0	0	0	0	0	0	37
21:15	0	43	6	0	0	0	0	0	0	0	0	0	0	49
21:30	0	26	3	0	0	0	0	0	0	0	0	0	0	29
21:45	0	21	3	0	0	0	0	0	0	0	0	0	0	24
22:00	0	15	5	0	0	0	0	0	0	0	0	0	0	20
22:15	0	16	2	0	1	0	0	0	0	0	0	0	0	19
22:30	0	17	0	0	0	0	0	0	0	0	0	0	0	17
22:45	0	12	2	0	1	0	0	0	0	0	0	0	0	15
23:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
23:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
23:30	0	4	1	0	1	0	0	0	0	0	0	0	0	6
23:45	0	16	1	0	0	0	0	0	0	0	0	0	0	17
Totals	**5**	**1944**	**413**	**3**	**70**	**2**		**3**						**2440**
% of Totals	0%	80%	17%	0%	3%	0%		0%						100%

AM Volumes	1	445	110	1	25	0	0	2	0	0	0	0	0	584
% AM	0%	18%	5%	0%	1%			0%						24%
AM Peak Hour	07:00	11:30	08:45	07:45	08:00			08:00						11:30
Volume	1	87	24	1	8			1						117
PM Volumes	4	1499	303	2	45	2	0	1	0	0	0	0	0	1856
% PM	0%	61%	12%	0%	2%	0%		0%						76%
PM Peak Hour	12:30	17:15	17:00	12:00	13:30	13:15		12:00						17:15
Volume	2	219	51	1	8	2		1						272

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	183	⟷	8%	296	⟷	12%	441	⟷	18%	1520	⟷	62%

Classification Definitions

1 Motorcycles
2 Passenger Cars
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4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Spivey Rd Bet. Shaw Ln & Spivey Ridge Cir

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_003

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	8	3	0	0	0	0	0	0	0	0	0	0	11
00:15	0	5	2	0	0	0	0	0	0	0	0	0	0	7
00:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
00:45	0	4	2	0	1	0	0	0	0	0	0	0	0	7
01:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
01:15	0	6	1	0	0	0	0	0	0	0	0	0	0	7
01:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
01:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
02:15	0	6	3	0	0	0	0	0	0	0	0	0	0	9
02:30	0	4	1	0	1	0	0	0	0	0	0	0	0	6
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	4
03:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
03:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	9	0	0	0	0	0	0	0	0	0	0	0	9
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
04:15	0	5	2	0	0	0	0	0	0	0	0	0	0	7
04:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
04:45	0	9	1	0	0	0	0	0	0	0	0	0	0	10
05:00	0	8	3	0	0	0	0	0	0	0	0	0	0	11
05:15	0	18	4	0	0	0	0	0	0	0	0	0	0	22
05:30	0	16	9	0	3	0	0	0	0	0	0	0	0	28
05:45	0	15	3	0	1	0	0	0	0	0	0	0	0	19
06:00	0	27	7	0	1	0	0	0	0	0	0	0	0	35
06:15	0	34	4	0	0	0	0	0	0	0	0	0	0	38
06:30	0	46	7	0	0	0	0	0	0	0	0	0	0	53
06:45	0	46	12	0	2	0	0	0	0	0	0	0	0	60
07:00	0	55	11	0	2	0	0	0	0	0	0	0	0	68
07:15	0	66	6	0	2	0	0	0	0	0	0	0	0	74
07:30	0	104	10	0	2	0	0	0	0	0	0	0	0	116
07:45	1	65	10	0	1	0	0	0	0	0	0	0	0	77
08:00	0	60	7	2	5	0	0	0	0	0	0	0	0	74
08:15	0	37	11	2	3	0	0	0	0	0	0	0	0	53
08:30	0	49	6	1	0	0	0	0	0	0	0	0	0	56
08:45	0	35	12	0	3	0	0	1	0	0	0	0	0	51
09:00	0	35	10	0	3	0	0	0	0	0	0	0	0	48
09:15	0	50	10	0	3	0	0	1	0	0	0	0	0	64
09:30	0	45	12	0	1	0	0	1	0	0	0	0	0	59
09:45	0	42	12	0	1	0	0	0	0	0	0	0	0	55
10:00	0	44	13	0	3	0	0	0	0	0	0	0	0	60
10:15	0	45	9	0	2	0	0	0	0	0	0	0	0	56
10:30	0	43	6	0	1	0	0	0	0	0	0	0	0	50
10:45	0	39	7	0	2	0	0	0	0	0	0	0	0	48
11:00	0	34	8	0	0	0	0	0	0	0	0	0	0	42
11:15	0	49	13	0	2	0	0	0	0	0	0	0	0	64
11:30	0	42	16	0	0	0	0	1	0	0	0	0	0	59
11:45	0	40	7	0	6	0	0	0	0	0	0	0	0	53
12:00 PM	0	35	6	1	2	0	0	0	0	0	0	0	0	44
12:15	0	56	10	0	2	0	0	0	0	0	0	0	0	68
12:30	0	43	4	0	1	0	0	0	0	0	0	0	0	48
12:45	0	59	16	0	3	0	0	1	0	0	0	0	0	79
13:00	0	50	13	0	1	0	0	0	0	0	0	0	0	64
13:15	2	44	18	0	0	0	0	1	0	0	0	0	0	65
13:30	0	52	12	0	1	1	0	0	0	0	0	0	0	66
13:45	0	55	13	0	4	0	0	0	0	0	0	0	0	72
14:00	0	54	13	0	2	1	0	0	0	0	0	0	0	70
14:15	0	43	7	0	3	0	0	0	0	0	0	0	0	53
14:30	0	52	14	0	2	0	0	0	0	0	0	0	0	68
14:45	0	67	11	0	2	0	0	0	0	0	0	0	0	80
15:00	0	44	11	0	1	0	0	0	0	0	0	0	0	56
15:15	0	81	13	0	5	0	0	0	0	0	0	0	0	99
15:30	0	48	10	0	0	0	0	0	0	0	0	0	0	58
15:45	0	75	11	0	2	0	0	0	0	0	0	0	0	88
16:00	0	54	16	0	0	0	0	0	0	0	0	0	0	70
16:15	0	62	16	1	1	0	0	0	0	0	0	0	0	80
16:30	0	64	12	2	4	0	0	0	0	0	0	0	0	82
16:45	0	63	6	1	1	0	0	0	0	0	0	0	0	71
17:00	0	65	22	0	0	0	0	0	0	0	0	0	0	87
17:15	0	82	22	0	3	0	0	0	0	0	0	0	0	107
17:30	0	87	15	0	0	0	0	0	0	0	0	0	0	102
17:45	1	79	19	0	1	0	0	0	0	0	0	0	0	100
18:00	1	79	20	0	3	0	0	0	0	0	0	0	0	103
18:15	0	66	14	0	2	0	0	0	0	0	0	0	0	82
18:30	0	76	12	0	2	0	0	0	0	0	0	0	0	90
18:45	0	71	9	0	0	0	0	0	0	0	0	0	0	80
19:00	0	71	10	0	1	0	0	0	0	0	0	0	0	82
19:15	0	51	16	0	0	0	0	0	0	0	0	0	0	67
19:30	0	45	14	0	1	0	0	0	0	0	0	0	0	60
19:45	0	53	6	0	1	0	0	0	0	0	0	0	0	60
20:00	0	48	9	0	3	0	0	0	0	0	0	0	0	60
20:15	0	52	4	0	0	0	0	0	0	0	0	0	0	56
20:30	0	48	5	0	0	0	0	0	0	0	0	0	0	53
20:45	0	43	6	0	1	0	0	0	0	0	0	0	0	50
21:00	0	48	5	0	1	0	0	0	0	0	0	0	0	54
21:15	0	58	7	0	1	0	0	0	0	0	0	0	0	66
21:30	0	35	6	0	0	0	0	0	0	0	0	0	0	41
21:45	0	33	5	0	0	0	0	0	0	0	0	0	0	38
22:00	0	24	5	0	0	0	0	0	0	0	0	0	0	29
22:15	0	25	4	0	1	0	0	0	0	0	0	0	0	30
22:30	0	24	1	0	0	0	0	0	0	0	0	0	0	25
22:45	0	23	2	0	1	0	0	0	0	0	0	0	0	26
23:00	0	16	0	0	0	0	0	0	0	0	0	0	0	16
23:15	0	13	4	0	0	0	0	0	0	0	0	0	0	17
23:30	0	10	1	0	1	0	0	0	0	0	0	0	0	12
23:45	0	20	2	0	0	0	0	0	0	0	0	0	0	22
Totals	**5**	**3741**	**744**	**10**	**111**	**2**		**6**						**4619**
% of Totals	0%	81%	16%	0%	2%	0%		0%						100%

AM Volumes	1	1295	267	5	51	0	0	4	0	0	0	0	0	1623
% AM	0%	28%	6%	0%	1%			0%						35%
AM Peak Hour	07:00	07:15	09:15	07:45	07:30			08:45						07:15
Volume	1	295	47	5	11			3						341
PM Volumes	4	2446	477	5	60	2	0	2	0	0	0	0	0	2996
% PM	0%	53%	10%	0%	1%	0%		0%						65%
PM Peak Hour	12:30	17:15	17:00	16:00	13:45	13:15		12:30						17:15
Volume	2	327	78	4	11	2		2						412

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	569	⟷	12%	506	⟷	11%	699	⟷	15%	2845	⟷	62%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Spivey Rd Bet. Shaw Ln & Spivey Ridge Cir

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_003n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	7
01:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
02:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
03:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
04:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23
05:00	0	51	17	0	3	0	0	0	0	0	0	0	0	71
06:00	0	121	24	0	3	0	0	0	0	0	0	0	0	148
07:00	0	208	21	0	3	0	0	0	0	0	0	0	0	232
08:00	0	127	20	4	3	0	0	0	0	0	0	0	0	154
09:00	0	108	23	0	4	0	0	2	0	0	0	0	0	137
10:00	0	105	19	0	5	0	0	0	0	0	0	0	0	129
11:00	0	83	23	0	5	0	0	0	0	0	0	0	0	111
12:00 PM	0	88	19	0	2	0	0	0	0	0	0	0	0	109
13:00	0	84	15	0	1	0	0	1	0	0	0	0	0	101
14:00	0	85	19	0	3	0	0	0	0	0	0	0	0	107
15:00	0	111	14	0	4	0	0	0	0	0	0	0	0	129
16:00	0	96	19	3	1	0	0	0	0	0	0	0	0	119
17:00	0	112	27	0	0	0	0	0	0	0	0	0	0	139
18:00	0	103	22	0	2	0	0	0	0	0	0	0	0	127
19:00	0	80	20	0	0	0	0	0	0	0	0	0	0	100
20:00	0	79	6	0	1	0	0	0	0	0	0	0	0	86
21:00	0	53	6	0	1	0	0	0	0	0	0	0	0	60
22:00	0	36	3	0	0	0	0	0	0	0	0	0	0	39
23:00	0	20	4	0	0	0	0	0	0	0	0	0	0	24
Totals		1797	331	7	41			3						2179
% of Totals		82%	15%	0%	2%			0%						100%

AM Volumes	0	850	157	4	26	0	0	2	0	0	0	0	0	1039
% AM		39%	7%	0%	1%			0%						48%
AM Peak Hour		07:00	06:00	08:00	10:00			09:00						07:00
Volume		208	24	4	5			2						232
PM Volumes	0	947	174	3	15	0	0	1	0	0	0	0	0	1140
% PM		43%	8%	0%	1%			0%						52%
PM Peak Hour		17:00	17:00	16:00	15:00			13:00						17:00
Volume		112	27	3	4			1						139

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	386		18%	210		10%	258		12%	1325		61%

Classification Definitions

- Motorcycles
- Passenger Cars
- **3** 2-Axle, 4-Tire Single Units
- **4** Buses
- **5** 2-Axle, 6-Tire Single Units
- **6** 3-Axle Single Units
- **7** > =4-Axle Single Units
- **8** <=4-Axle Single Trailers
- **9** 5-Axle Single Trailers
- **10** >=6-Axle Single Trailers
- **11** <=5-Axle Multi-Trailers
- **12** 6-Axle Multi-Trailers
- **13** >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Spivey Rd Bet. Shaw Ln & Spivey Ridge Cir

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_003s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	17	5	0	1	0	0	0	0	0	0	0	0	23
01:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
02:00	0	14	3	0	1	0	0	0	0	0	0	0	0	18
03:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
04:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
05:00	0	6	2	0	1	0	0	0	0	0	0	0	0	9
06:00	0	32	6	0	0	0	0	0	0	0	0	0	0	38
07:00	1	82	16	0	4	0	0	0	0	0	0	0	0	103
08:00	0	54	16	1	8	0	0	1	0	0	0	0	0	80
09:00	0	64	21	0	4	0	0	0	0	0	0	0	0	89
10:00	0	66	16	0	3	0	0	0	0	0	0	0	0	85
11:00	0	82	21	0	3	0	0	1	0	0	0	0	0	107
12:00 PM	0	105	17	1	6	0	0	1	0	0	0	0	0	130
13:00	2	117	41	0	5	1	0	0	0	0	0	0	0	166
14:00	0	131	26	0	6	1	0	0	0	0	0	0	0	164
15:00	0	137	31	0	4	0	0	0	0	0	0	0	0	172
16:00	0	147	31	1	5	0	0	0	0	0	0	0	0	184
17:00	1	201	51	0	4	0	0	0	0	0	0	0	0	257
18:00	1	189	33	0	5	0	0	0	0	0	0	0	0	228
19:00	0	140	26	0	3	0	0	0	0	0	0	0	0	169
20:00	0	112	18	0	3	0	0	0	0	0	0	0	0	133
21:00	0	121	17	0	1	0	0	0	0	0	0	0	0	139
22:00	0	60	9	0	2	0	0	0	0	0	0	0	0	71
23:00	0	39	3	0	1	0	0	0	0	0	0	0	0	43
Totals	5	1944	413	3	70	2		3						2440
% of Totals	0%	80%	17%	0%	3%	0%		0%						100%

AM Volumes	1	445	110	1	25	0	0	2	0	0	0	0	0	584
% AM	0%	18%	5%	0%	1%			0%						24%
AM Peak Hour	07:00	07:00	09:00	08:00	08:00			08:00						11:00
Volume	1	82	21	1	8			1						107
PM Volumes	4	1499	303	2	45	2	0	1	0	0	0	0	0	1856
% PM	0%	61%	12%	0%	2%	0%		0%						76%
PM Peak Hour	13:00	17:00	17:00	12:00	12:00	13:00		12:00						17:00
Volume	2	201	51	1	6	1		1						257

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	183	8%	296	12%	441	18%	1520	62%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Spivey Rd Bet. Shaw Ln & Spivey Ridge Cir

Day: Thursday
Date: 5/9/2019

City: Stockbridge
Project #: GA19_9345_003

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	21	8	0	1	0	0	0	0	0	0	0	0	30
01:00	0	23	3	0	0	0	0	0	0	0	0	0	0	26
02:00	0	17	5	0	1	0	0	0	0	0	0	0	0	23
03:00	0	19	1	0	0	0	0	0	0	0	0	0	0	20
04:00	0	26	5	0	0	0	0	0	0	0	0	0	0	31
05:00	0	57	19	0	4	0	0	0	0	0	0	0	0	80
06:00	0	153	30	0	3	0	0	0	0	0	0	0	0	186
07:00	1	290	37	0	7	0	0	0	0	0	0	0	0	335
08:00	0	181	36	5	11	0	0	1	0	0	0	0	0	234
09:00	0	172	44	0	8	0	0	2	0	0	0	0	0	226
10:00	0	171	35	0	8	0	0	0	0	0	0	0	0	214
11:00	0	165	44	0	8	0	0	1	0	0	0	0	0	218
12:00 PM	0	193	36	1	8	0	0	1	0	0	0	0	0	239
13:00	2	201	56	0	6	1	0	1	0	0	0	0	0	267
14:00	0	216	45	0	9	1	0	0	0	0	0	0	0	271
15:00	0	248	45	0	8	0	0	0	0	0	0	0	0	301
16:00	0	243	50	4	6	0	0	0	0	0	0	0	0	303
17:00	1	313	78	0	4	0	0	0	0	0	0	0	0	396
18:00	1	292	55	0	7	0	0	0	0	0	0	0	0	355
19:00	0	220	46	0	3	0	0	0	0	0	0	0	0	269
20:00	0	191	24	0	4	0	0	0	0	0	0	0	0	219
21:00	0	174	23	0	2	0	0	0	0	0	0	0	0	199
22:00	0	96	12	0	2	0	0	0	0	0	0	0	0	110
23:00	0	59	7	0	1	0	0	0	0	0	0	0	0	67
Totals	5	3741	744	10	111	2		6						4619
% of Totals	0%	81%	16%	0%	2%	0%		0%						100%

AM Volumes	1	1295	267	5	51	0	0	4	0	0	0	0	0	1623
% AM	0%	28%	6%	0%	1%			0%						35%
AM Peak Hour	07:00	07:00	09:00	08:00	08:00			09:00						07:00
Volume	1	290	44	5	11			2						335
PM Volumes	4	2446	477	5	60	2	0	2	0	0	0	0	0	2996
% PM	0%	53%	10%	0%	1%	0%		0%						65%
PM Peak Hour	13:00	17:00	17:00	16:00	14:00	13:00		12:00						17:00
Volume	2	313	78	4	9	1		1						396

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	569		12%	506		11%	699		15%	2845		62%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Project ID: 19-09344-001
Location: SR 42/US 23/N Henry Blvd & SR 138
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR 42/US 23/N Henry Blvd Northbound						SR 42/US 23/N Henry Blvd Southbound						SR 138 Eastbound						SR 138 Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	73	0	37	0	0	110	0	0	0	0	0	0	1	76	46	0	0	123	62	190	0	0	0	252	485
7:15 AM	84	0	72	0	0	156	0	0	0	0	0	0	0	123	74	0	0	197	85	185	0	0	0	270	623
7:30 AM	98	0	61	0	0	159	0	0	0	0	0	0	0	135	86	0	0	221	115	221	0	0	0	336	716
7:45 AM	96	0	65	0	0	161	0	0	0	0	0	0	0	120	81	0	0	201	98	198	0	0	0	296	658
Total	351	0	235	0	0	586	0	0	0	0	0	0	1	454	287	0	0	742	360	794	0	0	0	1154	2482
8:00 AM	78	0	71	0	0	149	0	0	1	0	0	1	0	113	61	0	0	174	82	228	0	0	0	310	634
8:15 AM	72	0	52	0	0	124	0	0	0	0	0	0	0	117	50	0	0	167	80	192	0	0	0	272	563
8:30 AM	88	0	38	0	0	126	0	0	0	0	0	0	0	88	67	0	0	155	83	163	0	0	0	246	527
8:45 AM	77	0	33	0	0	110	0	0	1	0	0	1	0	83	64	0	0	147	72	186	0	0	0	258	516
Total	315	0	194	0	0	509	0	0	2	0	0	2	0	401	242	0	0	643	317	769	0	0	0	1086	2240
BREAK																									
4:00 PM	70	0	65	0	0	135	0	0	0	0	0	0	0	180	127	0	0	307	46	132	0	0	0	178	620
4:15 PM	78	0	64	0	0	142	0	0	0	0	0	0	0	200	104	0	0	304	64	119	0	0	0	183	629
4:30 PM	69	0	81	0	0	150	0	0	0	0	0	0	0	171	110	0	0	281	60	121	0	0	0	181	612
4:45 PM	105	0	76	0	0	181	0	0	0	0	0	0	0	191	120	0	0	311	65	139	0	0	0	204	696
Total	322	0	286	0	0	608	0	0	0	0	0	0	0	742	461	0	0	1203	235	511	0	0	0	746	2557
5:00 PM	93	0	99	0	0	192	0	0	1	0	0	1	0	201	132	0	0	333	61	131	0	0	0	192	718
5:15 PM	95	0	94	0	0	189	0	0	0	0	0	0	0	256	169	0	0	425	64	117	0	0	0	181	795
5:30 PM	90	0	77	0	0	167	0	0	0	0	0	0	0	224	139	0	0	363	60	124	0	0	0	184	714
5:45 PM	79	0	88	0	0	167	0	0	0	0	0	0	0	212	152	0	0	364	54	123	0	0	0	177	708
Total	357	0	358	0	0	715	0	0	1	0	0	1	0	893	592	0	0	1485	239	495	0	0	0	734	2935
Grand Total	1345	0	1073	0	0	2418	0	0	3	0	0	3	1	2490	1582	0	0	4073	1151	2569	0	0	0	3720	10214
Apprch %	55.6	0.0	44.4	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	61.1	38.8	0.0	0.0		30.9	69.1	0.0	0.0	0.0		
Total %	13.2	0.0	10.5	0.0	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.4	15.5	0.0	0.0	39.9	11.3	25.2	0.0	0.0	0.0	36.4	
Cars, PU, Vans	1345	0	1073	0	0	2418	0	0	3		0	3	1	2490	1582	0		4073	1151	2569	0		0	3720	10214
% Cars, PU, Vans	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-001
Location: SR 42/US 23/N Henry Blvd & SR 138
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	SR 42/US 23/N Henry Blvd Northbound					SR 42/US 23/N Henry Blvd Southbound					SR 138 Eastbound					SR 138 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	84	0	72	0	156	0	0	0	0	0	0	123	74	0	197	85	185	0	0	270	623
7:30 AM	98	0	61	0	159	0	0	0	0	0	0	135	86	0	221	115	221	0	0	336	716
7:45 AM	96	0	65	0	161	0	0	0	0	0	0	120	81	0	201	98	198	0	0	296	658
8:00 AM	78	0	71	0	149	0	0	1	0	1	0	113	61	0	174	82	228	0	0	310	634
Total Volume	356	0	269	0	625	0	0	1	0	1	0	491	302	0	793	380	832	0	0	1212	2631
% App. Total	57.0	0.0	43.0	0.0	100	0.0	0.0	100.0	0.0	100	0.0	61.9	38.1	0.0	100	31.4	68.6	0.0	0.0	100	
PHF					0.970					0.250					0.897					0.902	0.919
Cars, PU, Vans	356	0	269	0	625	0	0	1	0	1	0	491	302	0	793	380	832	0	0	1212	2631
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

PM

	SR 42/US 23/N Henry Blvd Northbound					SR 42/US 23/N Henry Blvd Southbound					SR 138 Eastbound					SR 138 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	93	0	99	0	192	0	0	1	0	1	0	201	132	0	333	61	131	0	0	192	718
5:15 PM	95	0	94	0	189	0	0	0	0	0	0	256	169	0	425	64	117	0	0	181	795
5:30 PM	90	0	77	0	167	0	0	0	0	0	0	224	139	0	363	60	124	0	0	184	714
5:45 PM	79	0	88	0	167	0	0	0	0	0	0	212	152	0	364	54	123	0	0	177	708
Total Volume	357	0	358	0	715	0	0	1	0	1	0	893	592	0	1485	239	495	0	0	734	2935
% App. Total	49.9	0.0	50.1	0.0	100	0.0	0.0	100.0	0.0	100	0.0	60.1	39.9	0.0	100	32.6	67.4	0.0	0.0	100	
PHF					0.931					0.250					0.874					0.956	0.923
Cars, PU, Vans	357	0	358	0	715	0	0	1	0	1	0	893	592	0	1485	239	495	0	0	734	2935
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-002
Location: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Rock Quarry Rd Northbound						Rock Quarry Rd Southbound						SR 42-138/US 23/N Henry Blvd Eastbound						SR 42-138/US 23/N Henry Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	49	0	67	0	0	116	0	0	0	0	0	0	0	129	23	0	0	152	54	257	0	0	0	311	579
7:15 AM	35	0	78	0	0	113	0	0	0	0	0	0	0	158	46	0	0	204	87	259	0	0	0	346	663
7:30 AM	37	0	86	0	0	123	0	0	0	0	0	0	0	188	41	0	0	229	107	266	0	0	0	373	725
7:45 AM	33	0	91	0	0	124	0	0	0	0	0	0	0	162	50	0	0	212	67	285	0	0	0	352	688
Total	154	0	322	0	0	476	0	0	0	0	0	0	0	637	160	0	0	797	315	1067	0	0	0	1382	2655
8:00 AM	38	0	69	0	0	107	0	0	0	0	0	0	0	158	46	0	0	204	87	275	0	0	0	362	673
8:15 AM	28	0	55	0	0	83	0	0	0	0	0	0	0	142	50	0	0	192	81	270	0	0	0	351	626
8:30 AM	41	0	53	0	0	94	0	0	0	0	0	0	0	130	41	0	0	171	72	232	0	0	0	304	569
8:45 AM	32	0	51	0	0	83	0	0	0	0	0	0	0	135	49	0	0	184	78	246	0	0	0	324	591
Total	139	0	228	0	0	367	0	0	0	0	0	0	0	565	186	0	0	751	318	1023	0	0	0	1341	2459
BREAK																									
4:00 PM	59	0	70	0	0	129	0	0	0	0	0	0	0	289	45	0	0	334	55	200	0	0	0	255	718
4:15 PM	60	0	87	0	0	147	0	0	0	0	0	0	0	270	47	0	0	317	62	201	0	0	0	263	727
4:30 PM	58	0	72	0	0	130	0	0	0	0	0	0	0	282	63	0	0	345	63	183	0	0	0	246	721
4:45 PM	57	0	87	0	0	144	0	0	0	0	0	0	0	271	63	0	0	334	70	219	0	0	0	289	767
Total	234	0	316	0	0	550	0	0	0	0	0	0	0	1112	218	0	0	1330	250	803	0	0	0	1053	2933
5:00 PM	64	0	79	0	0	143	0	0	0	0	0	0	0	319	74	0	0	393	58	209	0	0	0	267	803
5:15 PM	80	0	100	0	0	180	0	0	0	0	0	0	0	350	52	0	0	402	62	214	0	0	0	276	858
5:30 PM	74	0	75	0	0	149	0	0	0	0	0	0	0	325	65	0	0	390	65	200	0	0	0	265	804
5:45 PM	58	0	74	0	0	132	0	0	0	0	0	0	0	374	64	0	0	438	56	204	0	0	0	260	830
Total	276	0	328	0	0	604	0	0	0	0	0	0	0	1368	255	0	0	1623	241	827	0	0	0	1068	3295
Grand Total	803	0	1194	0	0	1997	0	0	0	0	0	0	0	3682	819	0	0	4501	1124	3720	0	0	0	4844	11342
Apprch %	40.2	0.0	59.8	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	81.8	18.2	0.0	0.0		23.2	76.8	0.0	0.0	0.0		
Total %	7.1	0.0	10.5	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5	7.2	0.0	0.0	39.7	9.9	32.8	0.0	0.0	0.0	42.7	
Cars, PU, Vans	803	0	1194	0	0	1997	0	0	0		0	0	0	3682	819	0		4501	1124	3720	0		0	4844	11342
% Cars, PU, Vans	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-002
Location: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Rock Quarry Rd Northbound					Rock Quarry Rd Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	35	0	78	0	113	0	0	0	0	0	0	158	46	0	204	87	259	0	0	346	663
7:30 AM	37	0	86	0	123	0	0	0	0	0	0	188	41	0	229	107	266	0	0	373	725
7:45 AM	33	0	91	0	124	0	0	0	0	0	0	162	50	0	212	67	285	0	0	352	688
8:00 AM	38	0	69	0	107	0	0	0	0	0	0	158	46	0	204	87	275	0	0	362	673
Total Volume	143	0	324	0	467	0	0	0	0	0	0	666	183	0	849	348	1085	0	0	1433	2749
% App. Total	30.6	0.0	69.4	0.0	100	0.0	0.0	0.0	0.0	0	0.0	78.4	21.6	0.0	100	24.3	75.7	0.0	0.0	100	
PHF					0.942										0.927					0.960	0.948
Cars, PU, Vans	143	0	324	0	467	0	0	0	0	0	0	666	183	0	849	348	1085	0	0	1433	2749
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

PM

	Rock Quarry Rd Northbound					Rock Quarry Rd Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	64	0	79	0	143	0	0	0	0	0	0	319	74	0	393	58	209	0	0	267	803
5:15 PM	80	0	100	0	180	0	0	0	0	0	0	350	52	0	402	62	214	0	0	276	858
5:30 PM	74	0	75	0	149	0	0	0	0	0	0	325	65	0	390	65	200	0	0	265	804
5:45 PM	58	0	74	0	132	0	0	0	0	0	0	374	64	0	438	56	204	0	0	260	830
Total Volume	276	0	328	0	604	0	0	0	0	0	0	1368	255	0	1623	241	827	0	0	1068	3295
% App. Total	45.7	0.0	54.3	0.0	100	0.0	0.0	0.0	0.0	0	0.0	84.3	15.7	0.0	100	22.6	77.4	0.0	0.0	100	
PHF					0.839										0.926					0.967	0.960
Cars, PU, Vans	276	0	328	0	604	0	0	0	0	0	0	1368	255	0	1623	241	827	0	0	1068	3295
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-003
Location: S Lee St & SR 42-138/US 23/N Henry Blvd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	S Lee St Northbound						S Lee St Southbound						SR 42-138/US 23/N Henry Blvd Eastbound						SR 42-138/US 23/N Henry Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	4	0	2	0	0	6	1	0	2	0	0	3	0	159	12	0	0	171	1	287	0	0	0	288	468
7:15 AM	7	0	0	0	0	7	1	0	0	0	0	1	0	207	2	0	0	209	0	308	0	0	0	308	525
7:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	236	0	0	0	236	0	302	0	0	0	302	539
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	217	2	0	0	219	2	314	0	0	0	316	535
Total	12	0	2	0	0	14	2	0	2	0	0	4	0	819	16	0	0	835	3	1211	0	0	0	1214	2067
8:00 AM	0	0	2	0	0	2	1	0	0	0	0	1	0	185	3	0	0	188	5	309	1	0	0	315	506
8:15 AM	2	0	2	0	0	4	0	0	0	0	0	0	1	198	1	0	0	200	4	294	1	0	0	299	503
8:30 AM	3	0	3	0	0	6	0	0	0	0	0	0	1	163	7	0	0	171	1	258	3	0	0	262	439
8:45 AM	4	0	3	0	0	7	0	0	0	0	0	0	0	183	9	0	0	192	9	263	0	0	0	272	471
Total	9	0	10	0	0	19	1	0	0	0	0	1	2	729	20	0	0	751	19	1124	5	0	0	1148	1919
BREAK																									
4:00 PM	0	0	0	0	0	0	1	0	1	0	0	2	0	340	4	0	0	344	0	259	0	0	0	259	605
4:15 PM	4	0	2	0	0	6	0	0	1	0	0	1	0	327	1	0	0	328	2	263	1	0	0	266	601
4:30 PM	6	0	4	0	0	10	0	0	2	0	0	2	0	343	4	0	0	347	3	249	3	0	0	255	614
4:45 PM	3	0	5	0	0	8	1	0	1	0	0	2	0	347	6	0	0	353	5	280	3	0	0	288	651
Total	13	0	11	0	0	24	2	0	5	0	0	7	0	1357	15	0	0	1372	10	1051	7	0	0	1068	2471
5:00 PM	12	0	5	0	0	17	0	0	1	0	0	1	1	400	9	0	0	410	2	273	1	0	0	276	704
5:15 PM	1	0	2	0	0	3	1	0	1	0	0	2	1	401	4	0	0	406	1	298	2	0	0	301	712
5:30 PM	1	0	3	0	0	4	0	0	0	0	0	0	0	393	3	0	0	396	2	260	2	0	0	264	664
5:45 PM	7	0	3	0	0	10	1	0	1	0	0	2	0	430	4	0	0	434	3	252	1	0	0	256	702
Total	21	0	13	0	0	34	2	0	3	0	0	5	2	1624	20	0	0	1646	8	1083	6	0	0	1097	2782
Grand Total	55	0	36	0	0	91	7	0	10	0	0	17	4	4529	71	0	0	4604	40	4469	18	0	0	4527	9239
Apprch %	60.4	0.0	39.6	0.0	0.0		41.2	0.0	58.8	0.0	0.0		0.1	98.4	1.5	0.0	0.0		0.9	98.7	0.4	0.0	0.0		
Total %	0.6	0.0	0.4	0.0	0.0	1.0	0.1	0.0	0.1	0.0	0.0	0.2	0.0	49.0	0.8	0.0	0.0	49.8	0.4	48.4	0.2	0.0	0.0	49.0	
Cars, PU, Vans	55	0	36	0	0	91	7	0	10		0	17	4	4529	71	0		4604	40	4469	18		0	4527	9239
% Cars, PU, Vans	100.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-003
Location: S Lee St & SR 42-138/US 23/N Henry Blvd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	S Lee St Northbound					S Lee St Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	7	0	0	0	7	1	0	0	0	1	0	207	2	0	209	0	308	0	0	308	525
7:30 AM	1	0	0	0	1	0	0	0	0	0	0	236	0	0	236	0	302	0	0	302	539
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	217	2	0	219	2	314	0	0	316	535
8:00 AM	0	0	2	0	2	1	0	0	0	1	0	185	3	0	188	5	309	1	0	315	506
Total Volume	8	0	2	0	10	2	0	0	0	2	0	845	7	0	852	7	1233	1	0	1241	2105
% App. Total	80.0	0.0	20.0	0.0	100	100.0	0.0	0.0	0.0	100	0.0	99.2	0.8	0.0	100	0.6	99.4	0.1	0.0	100	
PHF					0.357					0.500					0.903					0.982	0.976
Cars, PU, Vans	8	0	2	0	10	2	0	0	0	2	0	845	7	0	852	7	1233	1	0	1241	2105
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	S Lee St Northbound					S Lee St Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	12	0	5	0	17	0	0	1	0	1	1	400	9	0	410	2	273	1	0	276	704
5:15 PM	1	0	2	0	3	1	0	1	0	2	1	401	4	0	406	1	298	2	0	301	712
5:30 PM	1	0	3	0	4	0	0	0	0	0	0	393	3	0	396	2	260	2	0	264	664
5:45 PM	7	0	3	0	10	1	0	1	0	2	0	430	4	0	434	3	252	1	0	256	702
Total Volume	21	0	13	0	34	2	0	3	0	5	2	1624	20	0	1646	8	1083	6	0	1097	2782
% App. Total	61.8	0.0	38.2	0.0	100	40.0	0.0	60.0	0.0	100	0.1	98.7	1.2	0.0	100	0.7	98.7	0.5	0.0	100	
PHF					0.500					0.625					0.948					0.911	0.977
Cars, PU, Vans	21	0	13	0	34	2	0	3	0	5	2	1624	20	0	1646	8	1083	6	0	1097	2782
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-004
Location: E Atlanta Rd/Harrell Dr & SR 42-138/US 23/N Henry Blvd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	E Atlanta Rd/Harrell Dr Northbound						E Atlanta Rd/Harrell Dr Southbound						SR 42-138/US 23/N Henry Blvd Eastbound						SR 42-138/US 23/N Henry Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	18	6	7	0	0	31	42	0	35	0	0	77	33	143	21	0	0	197	7	246	47	0	0	300	605
7:15 AM	23	9	15	0	0	47	48	3	36	0	0	87	28	152	28	0	0	208	6	275	36	0	0	317	659
7:30 AM	29	14	16	0	0	59	73	2	21	0	0	96	42	157	33	0	0	232	5	235	42	0	0	282	669
7:45 AM	6	3	12	0	0	21	62	0	20	0	0	82	41	158	2	0	0	201	1	288	51	0	0	340	644
Total	76	32	50	0	0	158	225	5	112	0	0	342	144	610	84	0	0	838	19	1044	176	0	0	1239	2577
8:00 AM	0	1	4	0	0	5	46	0	35	0	0	81	46	147	1	0	0	194	3	270	41	0	0	314	594
8:15 AM	1	3	1	0	0	5	67	1	20	0	0	88	33	141	0	0	0	174	1	254	37	0	0	292	559
8:30 AM	0	0	1	0	0	1	51	0	27	0	0	78	40	116	1	0	0	157	0	236	31	0	0	267	503
8:45 AM	0	1	6	0	0	7	61	1	24	0	0	86	36	130	0	0	0	166	2	234	30	0	0	266	525
Total	1	5	12	0	0	18	225	2	106	0	0	333	155	534	2	0	0	691	6	994	139	0	0	1139	2181
BREAK																									
4:00 PM	3	8	6	0	0	17	56	1	38	0	0	95	48	281	3	0	0	332	2	209	61	0	0	272	716
4:15 PM	1	6	8	0	0	15	71	0	39	0	0	110	57	247	4	0	0	308	5	201	59	0	0	265	698
4:30 PM	6	5	4	0	0	15	60	0	53	0	0	113	57	273	2	0	0	332	3	202	70	0	0	275	735
4:45 PM	1	5	13	0	0	19	68	1	33	0	0	102	51	266	1	0	0	318	4	206	72	0	0	282	721
Total	11	24	31	0	0	66	255	2	163	0	0	420	213	1067	10	0	0	1290	14	818	262	0	0	1094	2870
5:00 PM	7	8	16	0	0	31	81	0	31	0	0	112	55	301	8	0	0	364	5	217	56	0	0	278	785
5:15 PM	6	9	18	0	0	33	65	2	37	0	0	104	52	319	1	0	0	372	5	236	74	0	0	315	824
5:30 PM	7	4	15	0	0	26	71	1	25	0	0	97	56	315	1	0	0	372	1	200	60	0	0	261	756
5:45 PM	2	9	10	0	0	21	71	1	35	0	0	107	36	353	1	0	0	390	2	206	58	0	0	266	784
Total	22	30	59	0	0	111	288	4	128	0	0	420	199	1288	11	0	0	1498	13	859	248	0	0	1120	3149
Grand Total	110	91	152	0	0	353	993	13	509	0	0	1515	711	3499	107	0	0	4317	52	3715	825	0	0	4592	10777
Apprch %	31.2	25.8	43.1	0.0	0.0		65.5	0.9	33.6	0.0	0.0		16.5	81.1	2.5	0.0	0.0		1.1	80.9	18.0	0.0	0.0		
Total %	1.0	0.8	1.4	0.0	0.0	3.3	9.2	0.1	4.7	0.0	0.0	14.1	6.6	32.5	1.0	0.0	0.0	40.1	0.5	34.5	7.7	0.0	0.0	42.6	
Cars, PU, Vans	110	91	152	0	0	353	993	13	509		0	1515	711	3499	107	0		4317	52	3715	825		0	4592	10777
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-004
Location: E Atlanta Rd/Harrell Dr & SR 42-138/US 23/N Henry
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	E Atlanta Rd/Harrell Dr Northbound					E Atlanta Rd/Harrell Dr Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	18	6	7	0	31	42	0	35	0	77	33	143	21	0	197	7	246	47	0	300	605
7:15 AM	23	9	15	0	47	48	3	36	0	87	28	152	28	0	208	6	275	36	0	317	659
7:30 AM	29	14	16	0	59	73	2	21	0	96	42	157	33	0	232	5	235	42	0	282	669
7:45 AM	6	3	12	0	21	62	0	20	0	82	41	158	2	0	201	1	288	51	0	340	644
Total Volume	76	32	50	0	158	225	5	112	0	342	144	610	84	0	838	19	1044	176	0	1239	2577
% App. Total	48.1	20.3	31.6	0.0	100	65.8	1.5	32.7	0.0	100	17.2	72.8	10.0	0.0	100	1.5	84.3	14.2	0.0	100	
PHF					0.669					0.891					0.903					0.911	0.963
Cars, PU, Vans	76	32	50	0	158	225	5	112	0	342	144	610	84	0	838	19	1044	176	0	1239	2577
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	E Atlanta Rd/Harrell Dr Northbound					E Atlanta Rd/Harrell Dr Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	7	8	16	0	31	81	0	31	0	112	55	301	8	0	364	5	217	56	0	278	785
5:15 PM	6	9	18	0	33	65	2	37	0	104	52	319	1	0	372	5	236	74	0	315	824
5:30 PM	7	4	15	0	26	71	1	25	0	97	56	315	1	0	372	1	200	60	0	261	756
5:45 PM	2	9	10	0	21	71	1	35	0	107	36	353	1	0	390	2	206	58	0	266	784
Total Volume	22	30	59	0	111	288	4	128	0	420	199	1288	11	0	1498	13	859	248	0	1120	3149
% App. Total	19.8	27.0	53.2	0.0	100	68.6	1.0	30.5	0.0	100	13.3	86.0	0.7	0.0	100	1.2	76.7	22.1	0.0	100	
PHF					0.841					0.938					0.960					0.889	0.955
Cars, PU, Vans	22	30	59	0	111	288	4	128	0	420	199	1288	11	0	1498	13	859	248	0	1120	3149
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-005
Location: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Flippen Rd/Shields Rd Northbound						Flippen Rd/Shields Rd Southbound						SR 42-138/US 23/N Henry Blvd Eastbound						SR 42-138/US 23/N Henry Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	35	3	48	0	0	86	5	6	5	0	0	16	1	137	19	0	0	157	33	280	2	0	0	315	574
7:15 AM	49	1	40	0	0	90	7	14	1	0	0	22	0	170	18	0	0	188	36	320	2	0	0	358	658
7:30 AM	54	6	44	0	0	104	6	10	5	0	0	21	2	203	25	0	0	230	44	288	0	0	0	332	687
7:45 AM	60	4	47	0	0	111	6	10	6	0	0	22	0	161	32	0	0	193	37	329	2	0	0	368	694
Total	198	14	179	0	0	391	24	40	17	0	0	81	3	671	94	0	0	768	150	1217	6	0	0	1373	2613
8:00 AM	26	2	26	0	0	54	3	4	4	0	0	11	2	168	15	0	0	185	37	301	2	0	0	340	590
8:15 AM	36	7	37	0	0	80	3	9	6	0	0	18	2	147	22	0	0	171	33	269	1	0	0	303	572
8:30 AM	38	4	33	0	0	75	0	14	6	0	0	20	4	133	22	0	0	159	33	263	2	0	0	298	552
8:45 AM	34	2	26	0	0	62	0	7	2	0	0	9	1	138	23	0	0	162	40	248	0	0	0	288	521
Total	134	15	122	0	0	271	6	34	18	0	0	58	9	586	82	0	0	677	143	1081	5	0	0	1229	2235
BREAK																									
4:00 PM	47	14	50	0	0	111	6	13	5	0	0	24	5	297	49	0	0	351	34	207	3	0	0	244	730
4:15 PM	36	10	46	0	0	92	2	8	2	0	0	12	5	300	64	0	0	369	51	243	2	0	0	296	769
4:30 PM	41	5	44	0	0	90	2	8	3	0	0	13	8	335	45	0	0	388	41	233	3	0	0	277	768
4:45 PM	39	12	30	0	0	81	0	10	5	0	0	15	1	321	74	0	0	396	41	237	4	0	0	282	774
Total	163	41	170	0	0	374	10	39	15	0	0	64	19	1253	232	0	0	1504	167	920	12	0	0	1099	3041
5:00 PM	39	11	36	0	0	86	5	14	7	0	0	26	8	357	59	0	0	424	45	229	3	0	0	277	813
5:15 PM	37	10	46	0	0	93	1	11	5	0	0	17	4	364	71	0	0	439	50	253	8	0	0	311	860
5:30 PM	36	14	44	0	0	94	2	12	5	0	0	19	4	372	64	0	0	440	53	241	2	0	0	296	849
5:45 PM	36	10	42	0	0	88	3	7	7	0	0	17	6	402	77	0	0	485	40	215	2	0	0	257	847
Total	148	45	168	0	0	361	11	44	24	0	0	79	22	1495	271	0	0	1788	188	938	15	0	0	1141	3369
Grand Total	643	115	639	0	0	1397	51	157	74	0	0	282	53	4005	679	0	0	4737	648	4156	38	0	0	4842	11258
Apprch %	46.0	8.2	45.7	0.0	0.0		18.1	55.7	26.2	0.0	0.0		1.1	84.5	14.3	0.0	0.0		13.4	85.8	0.8	0.0	0.0		
Total %	5.7	1.0	5.7	0.0	0.0	12.4	0.5	1.4	0.7	0.0	0.0	2.5	0.5	35.6	6.0	0.0	0.0	42.1	5.8	36.9	0.3	0.0	0.0	43.0	
Cars, PU, Vans	643	115	639	0	0	1397	51	157	74		0	282	53	4005	679	0		4737	648	4156	38		0	4842	11258
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-005
Location: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Flippen Rd/Shields Rd Northbound					Flippen Rd/Shields Rd Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	49	1	40	0	90	7	14	1	0	22	0	170	18	0	188	36	320	2	0	358	658
7:30 AM	54	6	44	0	104	6	10	5	0	21	2	203	25	0	230	44	288	0	0	332	687
7:45 AM	60	4	47	0	111	6	10	6	0	22	0	161	32	0	193	37	329	2	0	368	694
8:00 AM	26	2	26	0	54	3	4	4	0	11	2	168	15	0	185	37	301	2	0	340	590
Total Volume	189	13	157	0	359	22	38	16	0	76	4	702	90	0	796	154	1238	6	0	1398	2629
% App. Total	52.6	3.6	43.7	0.0	100	28.9	50.0	21.1	0.0	100	0.5	88.2	11.3	0.0	100	11.0	88.6	0.4	0.0	100	
PHF					0.809					0.864					0.865					0.950	0.947
Cars, PU, Vans	189	13	157	0	359	22	38	16	0	76	4	702	90	0	796	154	1238	6	0	1398	2629
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Flippen Rd/Shields Rd Northbound					Flippen Rd/Shields Rd Southbound					SR 42-138/US 23/N Henry Blvd Eastbound					SR 42-138/US 23/N Henry Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	39	11	36	0	86	5	14	7	0	26	8	357	59	0	424	45	229	3	0	277	813
5:15 PM	37	10	46	0	93	1	11	5	0	17	4	364	71	0	439	50	253	8	0	311	860
5:30 PM	36	14	44	0	94	2	12	5	0	19	4	372	64	0	440	53	241	2	0	296	849
5:45 PM	36	10	42	0	88	3	7	7	0	17	6	402	77	0	485	40	215	2	0	257	847
Total Volume	148	45	168	0	361	11	44	24	0	79	22	1495	271	0	1788	188	938	15	0	1141	3369
% App. Total	41.0	12.5	46.5	0.0	100	13.9	55.7	30.4	0.0	100	1.2	83.6	15.2	0.0	100	16.5	82.2	1.3	0.0	100	
PHF					0.960					0.760					0.922					0.917	0.979
Cars, PU, Vans	148	45	168	0	361	11	44	24	0	79	22	1495	271	0	1788	188	938	15	0	1141	3369
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-006
Location: SR 42-138/US 23/N Henry Blvd & Davidson Pkwy/ Payless ShoeSource Dwy **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR 42-138/US 23/N Henry Blvd Northbound						SR 42-138/US 23/N Henry Blvd Southbound						Davidson Pkwy/ Payless ShoeSource Dwy Eastbound						Davidson Pkwy/ Payless ShoeSource Dwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	1	212	2	0	0	215	2	51	2	0	0	55	4	2	3	0	0	9	2	0	0	0	0	2	281
6:15 AM	3	225	3	0	0	231	3	73	4	0	0	80	4	1	8	0	0	13	3	0	1	0	0	4	328
6:30 AM	5	290	2	0	0	297	0	88	3	0	0	91	10	0	6	0	0	16	1	1	1	0	0	3	407
6:45 AM	8	278	3	0	0	289	1	104	2	0	0	107	12	0	11	0	0	23	1	0	2	0	0	3	422
Total	17	1005	10	0	0	1032	6	316	11	0	0	333	30	3	28	0	0	61	7	1	4	0	0	12	1438
7:00 AM	9	314	0	0	0	323	0	154	6	0	0	160	7	1	9	0	0	17	0	1	0	0	0	1	501
7:15 AM	15	357	8	0	0	380	1	116	0	0	0	117	5	0	27	0	0	32	3	0	2	0	0	5	534
7:30 AM	25	326	8	0	0	359	0	177	4	0	0	181	5	0	14	0	0	19	6	0	4	0	0	10	569
7:45 AM	26	301	6	0	0	333	4	171	11	0	0	186	10	1	8	0	0	19	1	1	4	0	0	6	544
Total	75	1298	22	0	0	1395	5	618	21	0	0	644	27	2	58	0	0	87	10	2	10	0	0	22	2148
8:00 AM	15	297	3	0	0	315	4	156	9	0	0	169	5	2	14	0	0	21	2	2	6	0	0	10	515
8:15 AM	15	287	5	0	0	307	2	169	7	1	0	179	4	1	16	0	0	21	2	1	4	0	0	7	514
8:30 AM	31	275	6	0	0	312	3	161	10	0	0	174	2	0	10	0	0	12	4	2	4	0	0	10	508
8:45 AM	11	254	3	0	0	268	5	167	9	0	0	181	0	1	15	0	0	16	2	0	6	0	0	8	473
Total	72	1113	17	0	0	1202	14	653	35	1	0	703	11	4	55	0	0	70	10	5	20	0	0	35	2010
9:00 AM	16	233	5	0	0	254	5	142	15	0	0	162	3	3	13	0	0	19	2	0	7	0	0	9	444
9:15 AM	11	232	8	0	0	251	6	155	7	0	0	168	6	0	20	0	0	26	2	1	7	0	0	10	455
9:30 AM	15	244	6	0	0	265	9	204	7	0	0	220	7	0	18	0	0	25	4	1	10	0	0	15	525
9:45 AM	22	199	3	0	0	224	4	180	11	0	0	195	6	1	13	0	0	20	4	1	11	0	0	16	455
Total	64	908	22	0	0	994	24	681	40	0	0	745	22	4	64	0	0	90	12	3	35	0	0	50	1879
10:00 AM	20	223	9	1	0	253	10	181	9	0	0	200	4	4	17	0	0	25	4	1	5	0	0	10	488
10:15 AM	14	206	8	1	0	229	7	221	14	0	0	242	3	0	20	0	0	23	7	1	11	0	0	19	513
10:30 AM	15	246	8	0	0	269	7	226	6	1	0	240	6	3	16	0	0	25	8	2	13	0	0	23	557
10:45 AM	19	191	10	0	0	220	6	203	15	0	0	224	8	1	19	0	0	28	5	0	10	0	0	15	487
Total	68	866	35	2	0	971	30	831	44	1	0	906	21	8	72	0	0	101	24	4	39	0	0	67	2045
11:00 AM	30	214	12	0	0	256	11	211	10	1	0	233	10	1	25	0	0	36	7	0	15	0	0	22	547
11:15 AM	26	214	3	0	0	243	19	226	13	0	0	258	6	2	18	0	0	26	4	1	9	0	0	14	541
11:30 AM	21	230	6	0	0	257	9	217	19	0	0	245	9	0	21	0	0	30	6	0	5	0	0	11	543
11:45 AM	17	205	3	0	0	225	9	240	7	0	0	256	8	2	31	0	0	41	4	1	6	0	0	11	533
Total	94	863	24	0	0	981	48	894	49	1	0	992	33	5	95	0	0	133	21	2	35	0	0	58	2164
12:00 PM	22	255	11	0	0	288	5	212	8	0	0	225	8	1	18	0	0	27	4	2	10	0	0	16	556
12:15 PM	9	247	7	0	0	263	5	227	12	0	0	244	8	1	21	0	0	30	7	2	9	0	0	18	555
12:30 PM	16	232	5	0	0	253	8	221	18	0	0	247	7	3	19	0	0	29	7	1	11	0	0	19	548
12:45 PM	23	242	8	0	0	273	10	247	11	0	0	268	5	2	21	0	0	28	6	1	11	0	0	18	587
Total	70	976	31	0	0	1077	28	907	49	0	0	984	28	7	79	0	0	114	24	6	41	0	0	71	2246
1:00 PM	27	244	4	0	0	275	5	264	14	0	0	283	5	1	23	0	0	29	6	5	17	0	0	28	615
1:15 PM	20	226	7	0	0	253	7	227	9	0	0	243	4	0	24	0	0	28	4	1	13	0	0	18	542
1:30 PM	20	229	11	0	0	260	2	251	10	1	0	264	3	0	16	0	0	19	6	0	8	0	0	14	557
1:45 PM	17	225	7	0	0	249	9	273	9	0	0	291	3	1	16	0	0	20	12	1	14	0	0	27	587
Total	84	924	29	0	0	1037	23	1015	42	1	0	1081	15	2	79	0	0	96	28	7	52	0	0	87	2301
2:00 PM	8	212	5	0	0	225	10	284	11	0	0	305	3	0	27	0	0	30	5	0	8	0	0	13	573
2:15 PM	15	225	3	0	0	243	12	253	19	0	0	284	4	2	26	0	0	32	7	0	11	0	0	18	577
2:30 PM	19	250	8	0	0	277	9	269	8	0	0	286	7	1	30	0	0	38	4	1	8	0	0	13	614
2:45 PM	21	245	12	0	0	278	9	300	15	0	0	324	6	0	26	0	0	32	2	0	15	0	0	17	651
Total	63	932	28	0	0	1023	40	1106	53	0	0	1199	20	3	109	0	0	132	18	1	42	0	0	61	2415
3:00 PM	19	234	7	0	0	260	5	288	20	0	0	313	4	2	19	0	0	25	10	1	4	0	0	15	613
3:15 PM	16	218	5	0	0	239	11	318	13	1	0	343	4	1	25	0	0	30	5	2	11	0	0	18	630
3:30 PM	17	244	8	0	0	269	13	310	10	0	0	333	4	0	24	0	0	28	10	4	12	0	0	26	656
3:45 PM	25	253	5	1	0	284	9	334	17	1	0	361	3	0	21	0	0	24	3	2	9	0	0	14	683
Total	77	949	25	1	0	1052	38	1250	60	2	0	1350	15	3	89	0	0	107	28	9	36	0	0	73	2582
4:00 PM	28	239	7	0	0	274	1	338	17	0	0	356	9	0	20	0	0	29	5	1	9	0	0	15	674
4:15 PM	24	217	4	0	0	245	3	344	14	0	0	361	6	3	22	0	0	31	5	1	14	0	0	20	657
4:30 PM	28	258	9	0	0	295	15	347	13	1	0	376	5	4	27	0	0	36	5	1	15	0	0	21	728
4:45 PM	19	233	10	0	0	262	10	387	20	0	0	417	8	1	22	0	0	31	11	1	11	0	0	23	733
Total	99	947	30	0	0	1076	29	1416	64	1	0	1510	28	8	91	0	0	127	26	4	49	0	0	79	2792
5:00 PM	30	222	11	0	0	263	8	412	22	0	0	442	5	0	30	0	0	35	7	0	11	0	0	18	758
5:15 PM	24	266	10	0	0	300	9	414	26	0	0	449	4	0	32	0	0	36	10	0	11	0	0	21	806
5:30 PM	24	248	9	0	0	281	14	441	14	0	0	469	5	2	23	0	0	30	8	1	12	0	0	21	801
5:45 PM	20	223	7	0	0	250	7	363	16	1	0	387	11	2	20	0	0	33	7	0	11	0	0	18	688
Total	98	959	37	0	0	1094	38	1630	78	1	0	1747	25	4	105	0	0	134	32	1	45	0	0	78	3053
6:00 PM	25	235	14	0	0	274	8	331	19	0	0	358	5	1	18	0	0	24	8	1	10	0	0	19	675
6:15 PM	13	245	8	0	0	266	5	350	6	0	0	361	5	0	8	0	0	13	5	1	6	0	0	12	652
6:30 PM	13	213	7	0	0	233	8	289	18	0	0	315	2	1	20	0	0	23	4	2	9	0	0	15	586
6:45 PM	12	187	10	0	0	209	13	308	17	0	0	338	9	4	16	0	0	29	8	1	10	0	0	19	595
Total	63	880	39	0	0	982	34	1278	60	0	0	1372	21	6	62	0	0	89	25	5	35	0	0	65	2508
Grand Total	944	12620	349	3	0	13916	357	12595	606	8	0	13566	296	59	986	0	0	1341	265	50	443	0	0	758	29581
Apprch %	6.8	90.7	2.5	0.0	0.0		2.6	92.8	4.5	0.1	0.0		22.1	4.4	73.5	0.0	0.0		35.0	6.6	58.4	0.0	0.0		
Total %	3.2	42.7	1.2	0.0	0.0	47.0	1.2	42.6	2.0	0.0	0.0	45.9	1.0	0.2	3.3	0.0	0.0	4.5	0.9	0.2	1.5	0.0	0.0	2.6	
Cars, PU, Vans	944	12620	349	3	0	13916	357	12595	606		0	13566	296	59	986	0		1341	265	50	443		0	758	29581
% Cars, PU, Vans	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-006
Location: SR 42-138/US 23/N Henry Blvd & Davidson Pkwy/ P
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	SR 42-138/US 23/N Henry Blvd Northbound					SR 42-138/US 23/N Henry Blvd Southbound					vidson Pkwy/ Payless ShoeSource D Eastbound					vidson Pkwy/ Payless ShoeSource D Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM to 10:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	15	357	8	0	380	1	116	0	0	117	5	0	27	0	32	3	0	2	0	5	534
7:30 AM	25	326	8	0	359	0	177	4	0	181	5	0	14	0	19	6	0	4	0	10	569
7:45 AM	26	301	6	0	333	4	171	11	0	186	10	1	8	0	19	1	1	4	0	6	544
8:00 AM	15	297	3	0	315	4	156	9	0	169	5	2	14	0	21	2	2	6	0	10	515
Total Volume	81	1281	25	0	1387	9	620	24	0	653	25	3	63	0	91	12	3	16	0	31	2162
% App. Total	5.8	92.4	1.8	0.0	100	1.4	94.9	3.7	0.0	100	27.5	3.3	69.2	0.0	100	38.7	9.7	51.6	0.0	100	
PHF					0.913					0.878					0.711					0.775	0.950
Cars, PU, Vans	81	1281	25	0	1387	9	620	24	0	653	25	3	63	0	91	12	3	16	0	31	2162
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

NOON

	SR 42-138/US 23/N Henry Blvd Northbound					SR 42-138/US 23/N Henry Blvd Southbound					vidson Pkwy/ Payless ShoeSource D Eastbound					vidson Pkwy/ Payless ShoeSource D Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 10:00 AM to 02:00 PM																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	9	247	7	0	263	5	227	12	0	244	8	1	21	0	30	7	2	9	0	18	555
12:30 PM	16	232	5	0	253	8	221	18	0	247	7	3	19	0	29	7	1	11	0	19	548
12:45 PM	23	242	8	0	273	10	247	11	0	268	5	2	21	0	28	6	1	11	0	18	587
1:00 PM	27	244	4	0	275	5	264	14	0	283	5	1	23	0	29	6	5	17	0	28	615
Total Volume	75	965	24	0	1064	28	959	55	0	1042	25	7	84	0	116	26	9	48	0	83	2305
% App. Total	7.0	90.7	2.3	0.0	100	2.7	92.0	5.3	0.0	100	21.6	6.0	72.4	0.0	100	31.3	10.8	57.8	0.0	100	
PHF					0.967					0.920					0.967					0.741	0.937
Cars, PU, Vans	75	965	24	0	1064	28	959	55	0	1042	25	7	84	0	116	26	9	48	0	83	2305
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	SR 42-138/US 23/N Henry Blvd Northbound					SR 42-138/US 23/N Henry Blvd Southbound					vidson Pkwy/ Payless ShoeSource D Eastbound					vidson Pkwy/ Payless ShoeSource D Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 02:00 PM to 07:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	19	233	10	0	262	10	387	20	0	417	8	1	22	0	31	11	1	11	0	23	733
5:00 PM	30	222	11	0	263	8	412	22	0	442	5	0	30	0	35	7	0	11	0	18	758
5:15 PM	24	266	10	0	300	9	414	26	0	449	4	0	32	0	36	10	0	11	0	21	806
5:30 PM	24	248	9	0	281	14	441	14	0	469	5	2	23	0	30	8	1	12	0	21	801
Total Volume	97	969	40	0	1106	41	1654	82	0	1777	22	3	107	0	132	36	2	45	0	83	3098
% App. Total	8.8	87.6	3.6	0.0	100	2.3	93.1	4.6	0.0	100	16.7	2.3	81.1	0.0	100	43.4	2.4	54.2	0.0	100	
PHF					0.922					0.947					0.917					0.902	0.961
Cars, PU, Vans	97	969	40	0	1106	41	1654	82	0	1777	22	3	107	0	132	36	2	45	0	83	3098
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-007
Location: SR 42/US 23/N Henry Blvd & SR 138/Lake Spivey Pkwy **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR 42/US 23/N Henry Blvd Northbound						SR 42/US 23/N Henry Blvd Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	165	145	18	0	0	328	5	46	35	0	0	86	21	11	79	0	0	111	9	10	3	0	0	22	547
7:15 AM	193	144	18	0	0	355	3	45	43	0	2	91	16	18	83	0	1	117	9	12	15	0	0	36	599
7:30 AM	169	133	8	0	0	310	5	64	42	0	1	111	29	11	101	0	1	141	12	21	10	0	0	43	605
7:45 AM	196	131	10	0	0	337	5	64	39	0	0	108	18	28	108	0	1	154	10	19	8	0	1	37	636
Total	723	553	54	0	0	1330	18	219	159	0	3	396	84	68	371	0	3	523	40	62	36	0	1	138	2387
8:00 AM	180	101	9	0	0	290	12	62	32	0	0	106	24	21	98	0	0	143	10	10	18	0	0	38	577
8:15 AM	173	108	11	0	0	292	10	67	40	0	0	117	27	23	109	0	0	159	7	21	12	0	0	40	608
8:30 AM	192	99	18	0	0	309	13	56	42	0	1	111	27	18	106	0	0	151	14	17	15	0	0	46	617
8:45 AM	154	93	17	0	0	264	6	65	33	0	0	104	17	17	102	0	0	136	11	22	24	0	0	57	561
Total	699	401	55	0	0	1155	41	250	147	0	1	438	95	79	415	0	0	589	42	70	69	0	0	181	2363
BREAK																									
4:00 PM	148	87	13	0	0	248	12	107	35	0	3	154	49	35	229	0	0	313	31	26	27	0	1	84	799
4:15 PM	147	98	14	0	0	259	15	112	31	0	1	158	65	43	219	0	1	327	42	38	20	0	0	100	844
4:30 PM	147	79	21	0	0	247	17	117	36	0	3	170	49	40	235	0	0	324	19	23	27	0	0	69	810
4:45 PM	154	91	23	0	0	268	17	156	30	0	2	203	67	39	247	0	0	353	30	34	21	0	1	85	909
Total	596	355	71	0	0	1022	61	492	132	0	9	685	230	157	930	0	1	1317	122	121	95	0	2	338	3362
5:00 PM	145	82	14	0	0	241	15	147	40	0	1	202	46	47	258	0	0	351	24	35	32	0	1	91	885
5:15 PM	155	84	22	0	0	261	17	151	29	0	5	197	71	48	279	0	0	398	32	45	36	0	0	113	969
5:30 PM	167	95	14	0	0	276	19	154	26	0	0	199	56	39	290	0	0	385	34	49	28	0	0	111	971
5:45 PM	154	99	21	0	1	274	19	127	29	0	2	175	58	39	250	0	0	347	35	43	30	0	1	108	904
Total	621	360	71	0	1	1052	70	579	124	0	8	773	231	173	1077	0	0	1481	125	172	126	0	2	423	3729
Grand Total	2639	1669	251	0	1	4559	190	1540	562	0	21	2292	640	477	2793	0	4	3910	329	425	326	0	5	1080	11841
Apprch %	57.9	36.6	5.5	0.0	0.0		8.3	67.2	24.5	0.0	0.9		16.4	12.2	71.4	0.0	0.1		30.5	39.4	30.2	0.0	0.5		
Total %	22.3	14.1	2.1	0.0	0.0	38.5	1.6	13.0	4.7	0.0	0.2	19.4	5.4	4.0	23.6	0.0	0.0	33.0	2.8	3.6	2.8	0.0	0.0	9.1	
Cars, PU, Vans	2556	1623	247	0	1	4426	186	1498	553		21	2237	633	469	2703	0		3805	324	415	323		5	1062	11530
% Cars, PU, Vans	96.9	97.2	98.4	0.0	100.0	97.1	97.9	97.3	98.4	0.0	100.0	97.6	98.9	98.3	96.8	0.0	0.0	97.3	98.5	97.6	99.1	0.0	100.0	98.3	97.4
Heavy Trucks	83	46	4	0		133	4	42	9	0		55	7	8	90	0		105	5	10	3	0		18	311
%Heavy Trucks	3.1	2.8	1.6	0.0	0.0	2.9	2.1	2.7	1.6	0.0	0.0	2.4	1.1	1.7	3.2	0.0	0.0	2.7	1.5	2.4	0.9	0.0	0.0	1.7	2.6

Project ID: 19-09344-007
Location: SR 42/US 23/N Henry Blvd & SR 138/Lake Spivey P
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	SR 42/US 23/N Henry Blvd Northbound					SR 42/US 23/N Henry Blvd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	196	131	10	0	337	5	64	39	0	108	18	28	108	0	154	10	19	8	0	37	636
8:00 AM	180	101	9	0	290	12	62	32	0	106	24	21	98	0	143	10	10	18	0	38	577
8:15 AM	173	108	11	0	292	10	67	40	0	117	27	23	109	0	159	7	21	12	0	40	608
8:30 AM	192	99	18	0	309	13	56	42	0	111	27	18	106	0	151	14	17	15	0	46	617
Total Volume	741	439	48	0	1228	40	249	153	0	442	96	90	421	0	607	41	67	53	0	161	2438
% App. Total	60.3	35.7	3.9	0.0	100	9.0	56.3	34.6	0.0	100	15.8	14.8	69.4	0.0	100	25.5	41.6	32.9	0.0	100	
PHF					0.911					0.944					0.954					0.875	0.958
Cars, PU, Vans	718	424	46	0	1188	39	235	151	0	425	96	87	396	0	579	39	63	53	0	155	2347
% Cars, PU, Vans	96.9	96.6	95.8	0.0	96.7	97.5	94.4	98.7	0.0	96.2	100.0	96.7	94.1	0.0	95.4	95.1	94.0	100.0	0.0	96.3	96.3
Heavy Trucks	23	15	2	0	40	1	14	2	0	17	0	3	25	0	28	2	4	0	0	6	91
%Heavy Trucks	3.1	3.4	4.2	0.0	3.3	2.5	5.6	1.3	0.0	3.8	0.0	3.3	5.9	0.0	4.6	4.9	6.0	0.0	0.0	3.7	3.7

PM

	SR 42/US 23/N Henry Blvd Northbound					SR 42/US 23/N Henry Blvd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	154	91	23	0	268	17	156	30	0	203	67	39	247	0	353	30	34	21	0	85	909
5:00 PM	145	82	14	0	241	15	147	40	0	202	46	47	258	0	351	24	35	32	0	91	885
5:15 PM	155	84	22	0	261	17	151	29	0	197	71	48	279	0	398	32	45	36	0	113	969
5:30 PM	167	95	14	0	276	19	154	26	0	199	56	39	290	0	385	34	49	28	0	111	971
Total Volume	621	352	73	0	1046	68	608	125	0	801	240	173	1074	0	1487	120	163	117	0	400	3734
% App. Total	59.4	33.7	7.0	0.0	100	8.5	75.9	15.6	0.0	100	16.1	11.6	72.2	0.0	100	30.0	40.8	29.3	0.0	100	
PHF					0.947					0.986					0.934					0.885	0.961
Cars, PU, Vans	596	346	72	0	1014	68	601	123	0	792	238	173	1050	0	1461	120	161	116	0	397	3664
% Cars, PU, Vans	96.0	98.3	98.6	0.0	96.9	100.0	98.8	98.4	0.0	98.9	99.2	100.0	97.8	0.0	98.3	100.0	98.8	99.1	0.0	99.3	98.1
Heavy Trucks	25	6	1	0	32	0	7	2	0	9	2	0	24	0	26	0	2	1	0	3	70
%Heavy Trucks	4.0	1.7	1.4	0.0	3.1	0.0	1.2	1.6	0.0	1.1	0.8	0.0	2.2	0.0	1.7	0.0	1.2	0.9	0.0	0.8	1.9

Project ID: 19-09344-008
Location: SR 42/US 23/N Henry Blvd & Valley Hill Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR 42/US 23/N Henry Blvd Northbound						SR 42/US 23/N Henry Blvd Southbound						Valley Hill Rd Eastbound						Valley Hill Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	166	9	0	0	175	8	63	0	0	0	71	0	0	0	0	0	0	20	0	45	0	0	65	311
7:15 AM	0	169	4	0	0	173	27	47	0	0	0	74	0	0	0	0	0	0	19	0	49	0	0	68	315
7:30 AM	0	166	10	0	0	176	20	81	0	0	0	101	0	0	0	0	0	0	18	0	63	0	0	81	358
7:45 AM	0	145	7	0	0	152	42	84	0	0	0	126	0	0	0	0	0	0	19	0	48	0	0	67	345
Total	0	646	30	0	0	676	97	275	0	0	0	372	0	0	0	0	0	0	76	0	205	0	0	281	1329
8:00 AM	0	132	5	0	0	137	29	94	0	0	0	123	0	0	0	0	0	0	18	0	60	0	0	78	338
8:15 AM	0	126	9	0	0	135	19	102	0	0	0	121	0	0	0	0	0	0	15	0	40	0	0	55	311
8:30 AM	0	108	4	0	0	112	26	86	0	0	0	112	0	0	0	0	0	0	12	0	34	0	0	46	270
8:45 AM	0	111	10	0	0	121	18	83	0	0	0	101	0	0	0	0	0	0	19	0	37	0	0	56	278
Total	0	477	28	0	0	505	92	365	0	0	0	457	0	0	0	0	0	0	64	0	171	0	0	235	1197
BREAK																									
4:00 PM	0	115	18	0	0	133	44	163	0	0	0	207	0	0	0	0	0	0	18	0	28	0	0	46	386
4:15 PM	0	128	19	0	0	147	38	161	0	0	0	199	0	0	0	0	0	0	12	0	22	0	0	34	380
4:30 PM	0	108	21	0	0	129	49	184	0	0	0	233	0	0	0	0	0	0	16	0	29	0	0	45	407
4:45 PM	0	118	17	0	0	135	61	206	0	0	0	267	0	0	0	0	0	0	21	0	18	0	0	39	441
Total	0	469	75	0	0	544	192	714	0	0	0	906	0	0	0	0	0	0	67	0	97	0	0	164	1614
5:00 PM	0	136	20	0	0	156	54	204	0	0	0	258	0	0	0	0	0	0	25	0	26	0	0	51	465
5:15 PM	0	128	22	0	0	150	74	194	0	0	0	268	0	0	0	0	0	0	21	0	25	0	0	46	464
5:30 PM	0	133	23	0	0	156	43	199	0	0	0	242	0	0	0	0	0	0	23	0	24	0	0	47	445
5:45 PM	0	140	22	0	0	162	60	195	0	0	0	255	0	0	0	0	0	0	32	0	23	0	0	55	472
Total	0	537	87	0	0	624	231	792	0	0	0	1023	0	0	0	0	0	0	101	0	98	0	0	199	1846
Grand Total	0	2129	220	0	0	2349	612	2146	0	0	0	2758	0	0	0	0	0	0	308	0	571	0	0	879	5986
Apprch %	0.0	90.6	9.4	0.0	0.0		22.2	77.8	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		35.0	0.0	65.0	0.0	0.0		
Total %	0.0	35.6	3.7	0.0	0.0	39.2	10.2	35.9	0.0	0.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	9.5	0.0	0.0	14.7	
Cars, PU, Vans	0	2129	220	0	0	2349	612	2146	0		0	2758	0	0	0	0		0	308	0	571		0	879	5986
% Cars, PU, Vans	0.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-008
Location: SR 42/US 23/N Henry Blvd & Valley Hill Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	SR 42/US 23/N Henry Blvd Northbound					SR 42/US 23/N Henry Blvd Southbound					Valley Hill Rd Eastbound					Valley Hill Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	169	4	0	173	27	47	0	0	74	0	0	0	0	0	19	0	49	0	68	315
7:30 AM	0	166	10	0	176	20	81	0	0	101	0	0	0	0	0	18	0	63	0	81	358
7:45 AM	0	145	7	0	152	42	84	0	0	126	0	0	0	0	0	19	0	48	0	67	345
8:00 AM	0	132	5	0	137	29	94	0	0	123	0	0	0	0	0	18	0	60	0	78	338
Total Volume	0	612	26	0	638	118	306	0	0	424	0	0	0	0	0	74	0	220	0	294	1356
% App. Total	0.0	95.9	4.1	0.0	100	27.8	72.2	0.0	0.0	100	0.0	0.0	0.0	0.0	0	25.2	0.0	74.8	0.0	100	
PHF					0.906					0.841										0.907	0.947
Cars, PU, Vans	0	612	26	0	638	118	306	0	0	424	0	0	0	0	0	74	0	220	0	294	1356
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

PM

	SR 42/US 23/N Henry Blvd Northbound					SR 42/US 23/N Henry Blvd Southbound					Valley Hill Rd Eastbound					Valley Hill Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	136	20	0	156	54	204	0	0	258	0	0	0	0	0	25	0	26	0	51	465
5:15 PM	0	128	22	0	150	74	194	0	0	268	0	0	0	0	0	21	0	25	0	46	464
5:30 PM	0	133	23	0	156	43	199	0	0	242	0	0	0	0	0	23	0	24	0	47	445
5:45 PM	0	140	22	0	162	60	195	0	0	255	0	0	0	0	0	32	0	23	0	55	472
Total Volume	0	537	87	0	624	231	792	0	0	1023	0	0	0	0	0	101	0	98	0	199	1846
% App. Total	0.0	86.1	13.9	0.0	100	22.6	77.4	0.0	0.0	100	0.0	0.0	0.0	0.0	0	50.8	0.0	49.2	0.0	100	
PHF					0.963					0.954										0.905	0.978
Cars, PU, Vans	0	537	87	0	624	231	792	0	0	1023	0	0	0	0	0	101	0	98	0	199	1846
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-009
Location: Walter Way & SR 138/Lake Spivey Pkwy/Stockbridge Rd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Walter Way Northbound						Walter Way Southbound						SR 138/Lake Spivey Pkwy/Stockbridge Rd Eastbound						SR 138/Lake Spivey Pkwy/Stockbridge Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	6	0	3	0	0	9	0	0	1	0	0	1	0	108	4	0	0	112	3	216	0	0	0	219	341
7:15 AM	10	1	4	0	0	15	0	1	0	0	0	1	0	129	5	0	0	134	3	257	0	0	0	260	410
7:30 AM	12	0	4	0	0	16	0	0	1	0	0	1	1	148	8	0	0	157	5	229	1	0	0	235	409
7:45 AM	7	0	7	0	0	14	0	0	4	0	0	4	1	156	13	0	0	170	3	261	1	0	0	265	453
Total	35	1	18	0	0	54	0	1	6	0	0	7	2	541	30	0	0	573	14	963	2	0	0	979	1613
8:00 AM	11	0	1	0	0	12	1	0	0	0	0	1	0	156	10	0	0	166	6	230	2	0	0	238	417
8:15 AM	9	0	6	0	0	15	0	0	1	0	0	1	1	175	9	0	0	185	7	256	1	0	0	264	465
8:30 AM	21	1	9	0	0	31	0	1	2	0	0	3	1	168	12	0	0	181	9	255	0	0	0	264	479
8:45 AM	12	0	14	0	0	26	0	1	1	0	0	2	2	167	19	0	0	188	7	216	5	0	0	228	444
Total	53	1	30	0	0	84	1	2	4	0	0	7	4	666	50	0	0	720	29	957	8	0	0	994	1805
BREAK																									
4:00 PM	25	1	31	0	0	57	9	1	6	0	0	16	7	321	22	0	0	350	12	209	6	0	0	227	650
4:15 PM	21	3	32	0	0	56	4	0	8	0	0	12	5	311	25	0	0	341	15	222	3	0	0	240	649
4:30 PM	23	0	16	0	0	39	3	3	9	0	0	15	5	332	25	0	0	362	11	210	6	0	0	227	643
4:45 PM	26	1	17	0	0	44	2	3	7	0	0	12	10	365	14	0	0	389	9	242	3	0	0	254	699
Total	95	5	96	0	0	196	18	7	30	0	0	55	27	1329	86	0	0	1442	47	883	18	0	0	948	2641
5:00 PM	15	0	27	0	0	42	5	2	5	0	0	12	2	370	20	0	0	392	10	226	5	0	0	241	687
5:15 PM	27	0	10	0	0	37	2	0	3	0	0	5	4	421	16	1	0	442	13	252	5	0	0	270	754
5:30 PM	17	2	22	0	0	41	1	3	10	0	0	14	7	427	10	0	0	444	12	245	10	0	0	267	766
5:45 PM	10	3	12	0	0	25	2	2	6	0	0	10	10	371	9	0	0	390	6	255	5	0	0	266	691
Total	69	5	71	0	0	145	10	7	24	0	0	41	23	1589	55	1	0	1668	41	978	25	0	0	1044	2898
Grand Total	252	12	215	0	0	479	29	17	64	0	0	110	56	4125	221	1	0	4403	131	3781	53	0	0	3965	8957
Apprch %	52.6	2.5	44.9	0.0	0.0		26.4	15.5	58.2	0.0	0.0		1.3	93.7	5.0	0.0	0.0		3.3	95.4	1.3	0.0	0.0		
Total %	2.8	0.1	2.4	0.0	0.0	5.3	0.3	0.2	0.7	0.0	0.0	1.2	0.6	46.1	2.5	0.0	0.0	49.2	1.5	42.2	0.6	0.0	0.0	44.3	
Cars, PU, Vans	252	12	215	0	0	479	29	17	64		0	110	56	4125	221	1		4403	131	3781	53		0	3965	8957
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-009
Location: Walter Way & SR 138/Lake Spivey Pkwy/Stockbrid
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Walter Way Northbound					Walter Way Southbound					138/Lake Spivey Pkwy/Stockbridge Eastbound					138/Lake Spivey Pkwy/Stockbridge Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	7	0	7	0	14	0	0	4	0	4	1	156	13	0	170	3	261	1	0	265	453
8:00 AM	11	0	1	0	12	1	0	0	0	1	0	156	10	0	166	6	230	2	0	238	417
8:15 AM	9	0	6	0	15	0	0	1	0	1	1	175	9	0	185	7	256	1	0	264	465
8:30 AM	21	1	9	0	31	0	1	2	0	3	1	168	12	0	181	9	255	0	0	264	479
Total Volume	48	1	23	0	72	1	1	7	0	9	3	655	44	0	702	25	1002	4	0	1031	1814
% App. Total	66.7	1.4	31.9	0.0	100	11.1	11.1	77.8	0.0	100	0.4	93.3	6.3	0.0	100	2.4	97.2	0.4	0.0	100	
PHF					0.581					0.563					0.949					0.973	0.947
Cars, PU, Vans	48	1	23	0	72	1	1	7	0	9	3	655	44	0	702	25	1002	4	0	1031	1814
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Walter Way Northbound					Walter Way Southbound					138/Lake Spivey Pkwy/Stockbridge Eastbound					138/Lake Spivey Pkwy/Stockbridge Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	26	1	17	0	44	2	3	7	0	12	10	365	14	0	389	9	242	3	0	254	699
5:00 PM	15	0	27	0	42	5	2	5	0	12	2	370	20	0	392	10	226	5	0	241	687
5:15 PM	27	0	10	0	37	2	0	3	0	5	4	421	16	1	442	13	252	5	0	270	754
5:30 PM	17	2	22	0	41	1	3	10	0	14	7	427	10	0	444	12	245	10	0	267	766
Total Volume	85	3	76	0	164	10	8	25	0	43	23	1583	60	1	1667	44	965	23	0	1032	2906
% App. Total	51.8	1.8	46.3	0.0	100	23.3	18.6	58.1	0.0	100	1.4	95.0	3.6	0.1	100	4.3	93.5	2.2	0.0	100	
PHF					0.932					0.768					0.939					0.956	0.948
Cars, PU, Vans	85	3	76	0	164	10	8	25	0	43	23	1583	60	1	1667	44	965	23	0	1032	2906
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-010
Location: Daniel Dr & SR 138/Lake Spivey Pkwy/Stockbridge Rd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Daniel Dr Northbound						Daniel Dr Southbound						SR 138/Lake Spivey Pkwy/Stockbridge Rd Eastbound						SR 138/Lake Spivey Pkwy/Stockbridge Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	1	0	1	0	0	2	3	1	35	0	0	39	19	130	2	0	0	151	0	218	6	0	0	224	416
7:15 AM	1	0	1	0	0	2	4	2	42	0	0	48	19	125	8	0	0	152	4	263	8	0	0	275	477
7:30 AM	6	2	1	0	0	9	10	2	49	0	0	61	28	144	7	0	0	179	3	236	7	0	0	246	495
7:45 AM	3	0	3	0	0	6	8	1	19	0	0	28	26	182	5	0	0	213	2	255	7	0	0	264	511
Total	11	2	6	0	0	19	25	6	145	0	0	176	92	581	22	0	0	695	9	972	28	0	0	1009	1899
8:00 AM	4	2	1	0	0	7	9	2	25	0	0	36	13	163	9	0	0	185	2	245	7	0	0	254	482
8:15 AM	1	2	3	0	0	6	5	1	32	0	0	38	14	172	3	0	0	189	2	229	13	0	0	244	477
8:30 AM	9	0	2	0	0	11	10	0	40	0	0	50	21	162	3	0	0	186	2	248	10	0	0	260	507
8:45 AM	2	0	1	0	0	3	7	1	34	0	0	42	16	181	4	0	0	201	2	214	15	0	0	231	477
Total	16	4	7	0	0	27	31	4	131	0	0	166	64	678	19	0	0	761	8	936	45	0	0	989	1943
BREAK																									
4:00 PM	5	1	0	0	0	6	23	2	35	0	0	60	22	353	9	0	0	384	1	205	30	0	0	236	686
4:15 PM	11	0	2	0	0	13	23	2	36	0	0	61	24	325	11	0	0	360	3	221	24	0	0	248	682
4:30 PM	7	1	1	0	0	9	11	3	33	0	0	47	27	362	6	0	0	395	3	226	18	0	0	247	698
4:45 PM	2	1	4	0	0	7	30	1	42	0	0	73	23	369	4	0	0	396	2	256	26	0	0	284	760
Total	25	3	7	0	0	35	87	8	146	0	0	241	96	1409	30	0	0	1535	9	908	98	0	0	1015	2826
5:00 PM	2	1	1	0	0	4	34	0	24	0	0	58	32	371	8	0	0	411	0	246	22	0	0	268	741
5:15 PM	2	1	2	0	0	5	20	2	35	0	0	57	24	419	2	0	0	445	5	248	21	0	0	274	781
5:30 PM	1	1	5	0	0	7	28	1	32	0	0	61	19	420	11	1	0	451	1	248	13	0	0	262	781
5:45 PM	6	1	2	0	0	9	32	2	33	0	0	67	23	353	7	0	0	383	3	264	20	0	0	287	746
Total	11	4	10	0	0	25	114	5	124	0	0	243	98	1563	28	1	0	1690	9	1006	76	0	0	1091	3049
Grand Total	63	13	30	0	0	106	257	23	546	0	0	826	350	4231	99	1	0	4681	35	3822	247	0	0	4104	9717
Apprch %	59.4	12.3	28.3	0.0	0.0		31.1	2.8	66.1	0.0	0.0		7.5	90.4	2.1	0.0	0.0		0.9	93.1	6.0	0.0	0.0		
Total %	0.6	0.1	0.3	0.0	0.0	1.1	2.6	0.2	5.6	0.0	0.0	8.5	3.6	43.5	1.0	0.0	0.0	48.2	0.4	39.3	2.5	0.0	0.0	42.2	
Cars, PU, Vans	63	13	30	0	0	106	257	23	546		0	826	350	4231	99	1		4681	35	3822	247		0	4104	9717
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-010
Location: Daniel Dr & SR 138/Lake Spivey Pkwy/Stockbridge
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Daniel Dr Northbound					Daniel Dr Southbound					138/Lake Spivey Pkwy/Stockbridge Eastbound					138/Lake Spivey Pkwy/Stockbridge Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	3	0	3	0	6	8	1	19	0	28	26	182	5	0	213	2	255	7	0	264	511
8:00 AM	4	2	1	0	7	9	2	25	0	36	13	163	9	0	185	2	245	7	0	254	482
8:15 AM	1	2	3	0	6	5	1	32	0	38	14	172	3	0	189	2	229	13	0	244	477
8:30 AM	9	0	2	0	11	10	0	40	0	50	21	162	3	0	186	2	248	10	0	260	507
Total Volume	17	4	9	0	30	32	4	116	0	152	74	679	20	0	773	8	977	37	0	1022	1977
% App. Total	56.7	13.3	30.0	0.0	100	21.1	2.6	76.3	0.0	100	9.6	87.8	2.6	0.0	100	0.8	95.6	3.6	0.0	100	
PHF					0.682					0.760					0.907					0.968	0.967
Cars, PU, Vans	17	4	9	0	30	32	4	116	0	152	74	679	20	0	773	8	977	37	0	1022	1977
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Daniel Dr Northbound					Daniel Dr Southbound					138/Lake Spivey Pkwy/Stockbridge Eastbound					138/Lake Spivey Pkwy/Stockbridge Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	2	1	4	0	7	30	1	42	0	73	23	369	4	0	396	2	256	26	0	284	760
5:00 PM	2	1	1	0	4	34	0	24	0	58	32	371	8	0	411	0	246	22	0	268	741
5:15 PM	2	1	2	0	5	20	2	35	0	57	24	419	2	0	445	5	248	21	0	274	781
5:30 PM	1	1	5	0	7	28	1	32	0	61	19	420	11	1	451	1	248	13	0	262	781
Total Volume	7	4	12	0	23	112	4	133	0	249	98	1579	25	1	1703	8	998	82	0	1088	3063
% App. Total	30.4	17.4	52.2	0.0	100	45.0	1.6	53.4	0.0	100	5.8	92.7	1.5	0.1	100	0.7	91.7	7.5	0.0	100	
PHF					0.821					0.853					0.944					0.958	0.980
Cars, PU, Vans	7	4	12	0	23	112	4	133	0	249	98	1579	25	1	1703	8	998	82	0	1088	3063
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-011
Location: Davidson Pkwy & SR 138/Lake Spivey Pkwy/Stockbridge Rd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Davidson Pkwy Northbound						Davidson Pkwy Southbound						SR 138/Lake Spivey Pkwy/Stockbridge Rd Eastbound						SR 138/Lake Spivey Pkwy/Stockbridge Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	52	2	4	0	0	58	6	2	20	0	0	28	12	132	21	0	0	165	2	236	9	0	0	247	498
7:15 AM	46	3	4	0	0	53	2	4	15	0	0	21	14	150	36	0	0	200	0	287	11	0	0	298	572
7:30 AM	74	5	3	0	0	82	6	2	25	0	0	33	22	165	60	0	0	247	5	257	16	0	0	278	640
7:45 AM	45	2	0	0	0	47	4	3	33	2	0	42	19	197	47	0	0	263	2	290	12	0	0	304	656
Total	217	12	11	0	0	240	18	11	93	2	0	124	67	644	164	0	0	875	9	1070	48	0	0	1127	2366
8:00 AM	57	1	5	0	0	63	8	3	22	0	0	33	21	171	32	0	0	224	5	227	14	0	0	246	566
8:15 AM	55	0	5	0	0	60	9	1	22	0	0	32	22	187	47	0	0	256	4	269	19	0	0	292	640
8:30 AM	68	5	8	0	0	81	17	2	30	0	0	49	38	160	37	0	0	235	3	259	12	0	0	274	639
8:45 AM	54	1	4	0	0	59	9	2	22	0	0	33	26	190	44	0	0	260	4	249	12	0	0	265	617
Total	234	7	22	0	0	263	43	8	96	0	0	147	107	708	160	0	0	975	16	1004	57	0	0	1077	2462
BREAK																									
4:00 PM	38	8	13	0	0	59	17	9	53	0	0	79	44	366	60	0	0	470	10	235	13	0	0	258	866
4:15 PM	55	3	16	0	0	74	14	5	52	0	0	71	41	322	71	0	0	434	12	242	14	0	0	268	847
4:30 PM	50	4	3	0	0	57	17	10	53	1	0	81	46	368	60	0	0	474	5	238	11	0	0	254	866
4:45 PM	67	6	15	0	0	88	17	8	45	0	0	70	28	377	65	0	0	470	6	275	21	0	0	302	930
Total	210	21	47	0	0	278	65	32	203	1	0	301	159	1433	256	0	0	1848	33	990	59	0	0	1082	3509
5:00 PM	42	5	7	0	0	54	17	3	40	0	0	60	48	372	90	0	0	510	13	239	19	0	0	271	895
5:15 PM	67	8	10	0	0	85	19	10	54	0	0	83	41	417	89	0	0	547	6	258	6	0	0	270	985
5:30 PM	56	10	11	0	0	77	20	7	50	1	0	78	37	414	82	0	0	533	7	277	18	0	0	302	990
5:45 PM	58	5	15	0	0	78	14	7	44	0	0	65	39	375	74	0	0	488	11	250	18	1	0	280	911
Total	223	28	43	0	0	294	70	27	188	1	0	286	165	1578	335	0	0	2078	37	1024	61	1	0	1123	3781
Grand Total	884	68	123	0	0	1075	196	78	580	4	0	858	498	4363	915	0	0	5776	95	4088	225	1	0	4409	12118
Apprch %	82.2	6.3	11.4	0.0	0.0		22.8	9.1	67.6	0.5	0.0		8.6	75.5	15.8	0.0	0.0		2.2	92.7	5.1	0.0	0.0		
Total %	7.3	0.6	1.0	0.0	0.0	8.9	1.6	0.6	4.8	0.0	0.0	7.1	4.1	36.0	7.6	0.0	0.0	47.7	0.8	33.7	1.9	0.0	0.0	36.4	
Cars, PU, Vans	884	68	123	0	0	1075	196	78	580		0	858	498	4363	915	0		5776	95	4088	225		0	4409	12118
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-011
Location: Davidson Pkwy & SR 138/Lake Spivey Pkwy/Stockl
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Davidson Pkwy Northbound					Davidson Pkwy Southbound					138/Lake Spivey Pkwy/Stockbridge Eastbound					138/Lake Spivey Pkwy/Stockbridge Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	74	5	3	0	82	6	2	25	0	33	22	165	60	0	247	5	257	16	0	278	640
7:45 AM	45	2	0	0	47	4	3	33	2	42	19	197	47	0	263	2	290	12	0	304	656
8:00 AM	57	1	5	0	63	8	3	22	0	33	21	171	32	0	224	5	227	14	0	246	566
8:15 AM	55	0	5	0	60	9	1	22	0	32	22	187	47	0	256	4	269	19	0	292	640
Total Volume	231	8	13	0	252	27	9	102	2	140	84	720	186	0	990	16	1043	61	0	1120	2502
% App. Total	91.7	3.2	5.2	0.0	100	19.3	6.4	72.9	1.4	100	8.5	72.7	18.8	0.0	100	1.4	93.1	5.4	0.0	100	
PHF					0.768					0.833					0.941					0.921	0.954
Cars, PU, Vans	231	8	13	0	252	27	9	102	2	140	84	720	186	0	990	16	1043	61	0	1120	2502
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Davidson Pkwy Northbound					Davidson Pkwy Southbound					138/Lake Spivey Pkwy/Stockbridge Eastbound					138/Lake Spivey Pkwy/Stockbridge Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	67	6	15	0	88	17	8	45	0	70	28	377	65	0	470	6	275	21	0	302	930
5:00 PM	42	5	7	0	54	17	3	40	0	60	48	372	90	0	510	13	239	19	0	271	895
5:15 PM	67	8	10	0	85	19	10	54	0	83	41	417	89	0	547	6	258	6	0	270	985
5:30 PM	56	10	11	0	77	20	7	50	1	78	37	414	82	0	533	7	277	18	0	302	990
Total Volume	232	29	43	0	304	73	28	189	1	291	154	1580	326	0	2060	32	1049	64	0	1145	3800
% App. Total	76.3	9.5	14.1	0.0	100	25.1	9.6	64.9	0.3	100	7.5	76.7	15.8	0.0	100	2.8	91.6	5.6	0.0	100	
PHF					0.864					0.877					0.941					0.948	0.960
Cars, PU, Vans	232	29	43	0	304	73	28	189	1	291	154	1580	326	0	2060	32	1049	64	0	1145	3800
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-012
Location: I-675 NB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	I-675 NB Ramps Northbound						I-675 NB Ramps Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	5	0	22	0	0	27	0	0	0	0	0	0	104	150	0	0	0	254	0	231	68	0	0	299	580
7:15 AM	4	0	29	0	0	33	0	0	0	0	0	0	109	165	0	0	0	274	0	285	79	0	0	364	671
7:30 AM	10	0	32	0	0	42	0	0	0	0	0	0	125	213	0	0	0	338	0	254	87	0	0	341	721
7:45 AM	14	0	29	0	0	43	0	0	0	0	0	0	133	224	0	0	0	357	0	300	68	0	0	368	768
Total	33	0	112	0	0	145	0	0	0	0	0	0	471	752	0	0	0	1223	0	1070	302	0	0	1372	2740
8:00 AM	7	0	28	0	0	35	0	0	0	0	0	0	86	204	0	1	0	291	0	255	64	0	0	319	645
8:15 AM	12	1	44	0	0	57	0	0	0	0	0	0	78	211	0	0	0	289	0	277	64	0	0	341	687
8:30 AM	4	0	39	0	0	43	0	0	0	0	0	0	78	201	0	0	0	279	0	284	78	0	0	362	684
8:45 AM	12	0	37	0	0	49	0	0	0	0	0	0	69	230	0	0	0	299	0	247	66	0	0	313	661
Total	35	1	148	0	0	184	0	0	0	0	0	0	311	846	0	1	0	1158	0	1063	272	0	0	1335	2677
BREAK																									
4:00 PM	12	0	54	0	0	66	0	0	0	0	0	0	72	407	0	0	0	479	0	254	61	0	0	315	860
4:15 PM	12	0	59	0	0	71	0	0	0	0	0	0	81	373	0	0	0	454	0	294	71	0	0	365	890
4:30 PM	12	0	51	0	0	63	0	0	0	0	0	0	73	424	0	0	0	497	0	270	71	0	0	341	901
4:45 PM	9	0	31	0	0	40	0	0	0	0	0	0	87	446	0	0	0	533	0	307	67	0	0	374	947
Total	45	0	195	0	0	240	0	0	0	0	0	0	313	1650	0	0	0	1963	0	1125	270	0	0	1395	3598
5:00 PM	14	0	38	0	0	52	0	0	0	0	0	0	93	470	0	0	0	563	0	249	72	0	0	321	936
5:15 PM	13	1	44	0	0	58	0	0	0	0	0	0	77	507	0	0	0	584	0	317	62	0	0	379	1021
5:30 PM	9	0	35	0	0	44	0	0	0	0	0	0	85	489	0	0	0	574	0	320	64	0	0	384	1002
5:45 PM	12	0	37	0	0	49	0	0	0	0	0	0	103	442	0	0	0	545	0	310	49	0	0	359	953
Total	48	1	154	0	0	203	0	0	0	0	0	0	358	1908	0	0	0	2266	0	1196	247	0	0	1443	3912
Grand Total	161	2	609	0	0	772	0	0	0	0	0	0	1453	5156	0	1	0	6610	0	4454	1091	0	0	5545	12927
Apprch %	20.9	0.3	78.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0		22.0	78.0	0.0	0.0	0.0		0.0	80.3	19.7	0.0	0.0		
Total %	1.2	0.0	4.7	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	39.9	0.0	0.0	0.0	51.1	0.0	34.5	8.4	0.0	0.0	42.9	
Cars, PU, Vans	161	2	609	0	0	772	0	0	0		0	0	1453	5156	0	1		6610	0	4454	1091		0	5545	12927
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-012
Location: I-675 NB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	I-675 NB Ramps Northbound					I-675 NB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	10	0	32	0	42	0	0	0	0	0	125	213	0	0	338	0	254	87	0	341	721
7:45 AM	14	0	29	0	43	0	0	0	0	0	133	224	0	0	357	0	300	68	0	368	768
8:00 AM	7	0	28	0	35	0	0	0	0	0	86	204	0	1	291	0	255	64	0	319	645
8:15 AM	12	1	44	0	57	0	0	0	0	0	78	211	0	0	289	0	277	64	0	341	687
Total Volume	43	1	133	0	177	0	0	0	0	0	422	852	0	1	1275	0	1086	283	0	1369	2821
% App. Total	24.3	0.6	75.1	0.0	100	0.0	0.0	0.0	0.0	0	33.1	66.8	0.0	0.1	100	0.0	79.3	20.7	0.0	100	
PHF					0.776										0.893					0.930	0.918
Cars, PU, Vans	43	1	133	0	177	0	0	0	0	0	422	852	0	1	1275	0	1086	283	0	1369	2821
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

PM

	I-675 NB Ramps Northbound					I-675 NB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	14	0	38	0	52	0	0	0	0	0	93	470	0	0	563	0	249	72	0	321	936
5:15 PM	13	1	44	0	58	0	0	0	0	0	77	507	0	0	584	0	317	62	0	379	1021
5:30 PM	9	0	35	0	44	0	0	0	0	0	85	489	0	0	574	0	320	64	0	384	1002
5:45 PM	12	0	37	0	49	0	0	0	0	0	103	442	0	0	545	0	310	49	0	359	953
Total Volume	48	1	154	0	203	0	0	0	0	0	358	1908	0	0	2266	0	1196	247	0	1443	3912
% App. Total	23.6	0.5	75.9	0.0	100	0.0	0.0	0.0	0.0	0	15.8	84.2	0.0	0.0	100	0.0	82.9	17.1	0.0	100	
PHF					0.875										0.970					0.939	0.958
Cars, PU, Vans	48	1	154	0	203	0	0	0	0	0	358	1908	0	0	2266	0	1196	247	0	1443	3912
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-013
Location: I-675 SB Ramps & SR 138/Lake Spivey Pkwy **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	I-675 SB Ramps Northbound						I-675 SB Ramps Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	29	0	83	0	0	112	0	228	13	0	0	241	23	204	0	0	0	227	580
7:15 AM	0	0	0	0	0	0	34	0	84	0	0	118	0	246	19	0	0	265	42	249	0	0	0	291	674
7:30 AM	0	0	0	0	0	0	28	0	126	0	0	154	0	305	16	0	0	321	25	234	0	0	0	259	734
7:45 AM	0	0	0	0	0	0	51	0	115	0	0	166	0	300	17	0	0	317	27	291	0	0	0	318	801
Total	0	0	0	0	0	0	142	0	408	0	0	550	0	1079	65	0	0	1144	117	978	0	0	0	1095	2789
8:00 AM	0	0	0	0	0	0	46	0	115	0	0	161	0	261	9	0	0	270	17	250	0	0	0	267	698
8:15 AM	0	0	0	0	0	0	47	1	101	0	0	149	0	233	11	0	0	244	18	262	0	0	0	280	673
8:30 AM	0	0	0	0	0	0	43	0	84	0	0	127	0	233	9	0	0	242	42	252	0	0	0	294	663
8:45 AM	0	0	0	0	0	0	37	0	87	0	0	124	0	277	11	0	0	288	33	230	0	0	0	263	675
Total	0	0	0	0	0	0	173	1	387	0	0	561	0	1004	40	0	0	1044	110	994	0	0	0	1104	2709
BREAK																									
4:00 PM	0	0	0	0	0	0	99	0	120	0	0	219	0	377	15	0	0	392	24	252	0	0	0	276	887
4:15 PM	0	0	0	0	0	0	78	2	130	0	0	210	0	380	8	0	0	388	30	268	0	0	0	298	896
4:30 PM	0	0	0	0	0	0	78	1	134	0	0	213	0	431	21	0	0	452	19	258	0	0	0	277	942
4:45 PM	0	0	0	0	0	0	110	2	128	0	0	240	0	409	12	0	0	421	40	272	0	0	0	312	973
Total	0	0	0	0	0	0	365	5	512	0	0	882	0	1597	56	0	0	1653	113	1050	0	0	0	1163	3698
5:00 PM	0	0	0	0	0	0	134	1	124	0	0	259	0	451	12	0	0	463	19	256	0	0	0	275	997
5:15 PM	0	0	0	0	0	0	102	1	144	0	0	247	0	480	10	0	0	490	21	306	0	0	0	327	1064
5:30 PM	0	0	0	0	0	0	128	2	160	0	0	290	0	448	19	0	0	467	26	293	0	0	0	319	1076
5:45 PM	0	0	0	0	0	0	99	0	151	0	0	250	0	444	17	0	0	461	30	292	0	0	0	322	1033
Total	0	0	0	0	0	0	463	4	579	0	0	1046	0	1823	58	0	0	1881	96	1147	0	0	0	1243	4170
Grand Total	0	0	0	0	0	0	1143	10	1886	0	0	3039	0	5503	219	0	0	5722	436	4169	0	0	0	4605	13366
Apprch %	0.0	0.0	0.0	0.0	0.0		37.6	0.3	62.1	0.0	0.0		0.0	96.2	3.8	0.0	0.0		9.5	90.5	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.1	14.1	0.0	0.0	22.7	0.0	41.2	1.6	0.0	0.0	42.8	3.3	31.2	0.0	0.0	0.0	34.5	
Cars, PU, Vans	0	0	0	0	0	0	1143	10	1886		0	3039	0	5503	219	0		5722	436	4169	0		0	4605	13366
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-013
Location: I-675 SB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	I-675 SB Ramps Northbound					I-675 SB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	0	0	0	0	34	0	84	0	118	0	246	19	0	265	42	249	0	0	291	674
7:30 AM	0	0	0	0	0	28	0	126	0	154	0	305	16	0	321	25	234	0	0	259	734
7:45 AM	0	0	0	0	0	51	0	115	0	166	0	300	17	0	317	27	291	0	0	318	801
8:00 AM	0	0	0	0	0	46	0	115	0	161	0	261	9	0	270	17	250	0	0	267	698
Total Volume	0	0	0	0	0	159	0	440	0	599	0	1112	61	0	1173	111	1024	0	0	1135	2907
% App. Total	0.0	0.0	0.0	0.0	0	26.5	0.0	73.5	0.0	100	0.0	94.8	5.2	0.0	100	9.8	90.2	0.0	0.0	100	
PHF										0.902					0.914					0.892	0.907
Cars, PU, Vans	0	0	0	0	0	159	0	440	0	599	0	1112	61	0	1173	111	1024	0	0	1135	2907
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

PM

	I-675 SB Ramps Northbound					I-675 SB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	0	0	0	0	134	1	124	0	259	0	451	12	0	463	19	256	0	0	275	997
5:15 PM	0	0	0	0	0	102	1	144	0	247	0	480	10	0	490	21	306	0	0	327	1064
5:30 PM	0	0	0	0	0	128	2	160	0	290	0	448	19	0	467	26	293	0	0	319	1076
5:45 PM	0	0	0	0	0	99	0	151	0	250	0	444	17	0	461	30	292	0	0	322	1033
Total Volume	0	0	0	0	0	463	4	579	0	1046	0	1823	58	0	1881	96	1147	0	0	1243	4170
% App. Total	0.0	0.0	0.0	0.0	0	44.3	0.4	55.4	0.0	100	0.0	96.9	3.1	0.0	100	7.7	92.3	0.0	0.0	100	
PHF										0.902					0.960					0.950	0.969
Cars, PU, Vans	0	0	0	0	0	463	4	579	0	1046	0	1823	58	0	1881	96	1147	0	0	1243	4170
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-014
Location: Hannover Pkwy/Peridot Plwy & SR 138/Lake Spivey Pkwy **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Hannover Pkwy/Peridot Plwy Northbound						Hannover Pkwy/Peridot Plwy Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	5	0	11	0	0	16	25	3	21	0	0	49	9	198	3	0	0	210	11	274	6	0	0	291	566
7:15 AM	7	1	25	1	0	34	30	2	9	0	0	41	5	219	4	0	0	228	16	293	6	0	0	315	618
7:30 AM	5	0	22	0	0	27	22	4	15	0	0	41	6	275	7	0	0	288	26	336	13	0	0	375	731
7:45 AM	6	0	17	0	0	23	28	1	22	0	0	51	9	287	7	0	0	303	23	365	16	0	0	404	781
Total	23	1	75	1	0	100	105	10	67	0	0	182	29	979	21	0	0	1029	76	1268	41	0	0	1385	2696
8:00 AM	4	2	15	0	0	21	11	2	17	0	0	30	12	239	9	0	0	260	27	320	12	0	0	359	670
8:15 AM	3	2	22	0	0	27	8	1	10	0	0	19	13	219	5	0	0	237	31	325	15	1	0	372	655
8:30 AM	4	0	16	0	0	20	12	1	11	0	0	24	14	221	9	0	0	244	21	290	17	0	0	328	616
8:45 AM	6	0	27	0	0	33	20	2	14	0	0	36	9	233	10	0	0	252	30	262	14	1	0	307	628
Total	17	4	80	0	0	101	51	6	52	0	0	109	48	912	33	0	0	993	109	1197	58	2	0	1366	2569
BREAK																									
4:00 PM	13	4	35	0	0	52	16	5	3	0	0	24	7	336	9	0	0	352	49	328	22	1	0	400	828
4:15 PM	19	0	28	0	0	47	10	4	7	0	0	21	10	370	14	1	0	395	38	340	14	0	0	392	855
4:30 PM	17	4	48	0	0	69	20	3	7	0	0	30	13	360	8	0	0	381	41	333	19	0	0	393	873
4:45 PM	14	5	50	0	0	69	20	4	12	0	0	36	9	362	9	1	0	381	52	339	18	0	0	409	895
Total	63	13	161	0	0	237	66	16	29	0	0	111	39	1428	40	2	0	1509	180	1340	73	1	0	1594	3451
5:00 PM	17	3	47	0	0	67	25	3	7	0	0	35	5	408	14	0	0	427	39	322	21	0	0	382	911
5:15 PM	18	8	46	0	0	72	20	5	19	0	0	44	10	419	11	0	0	440	52	366	26	0	0	444	1000
5:30 PM	15	7	53	0	0	75	15	2	8	0	0	25	15	401	15	0	0	431	49	375	19	0	0	443	974
5:45 PM	15	5	51	0	0	71	25	7	12	0	0	44	15	362	7	0	0	384	57	361	29	0	0	447	946
Total	65	23	197	0	0	285	85	17	46	0	0	148	45	1590	47	0	0	1682	197	1424	95	0	0	1716	3831
Grand Total	168	41	513	1	0	723	307	49	194	0	0	550	161	4909	141	2	0	5213	562	5229	267	3	0	6061	12547
Apprch %	23.2	5.7	71.0	0.1	0.0		55.8	8.9	35.3	0.0	0.0		3.1	94.2	2.7	0.0	0.0		9.3	86.3	4.4	0.0	0.0		
Total %	1.3	0.3	4.1	0.0	0.0	5.8	2.4	0.4	1.5	0.0	0.0	4.4	1.3	39.1	1.1	0.0	0.0	41.5	4.5	41.7	2.1	0.0	0.0	48.3	
Cars, PU, Vans	168	41	513	1	0	723	307	49	194		0	550	161	4909	141	2		5213	562	5229	267		0	6061	12547
% Cars, PU, Vans	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-014
Location: Hannover Pkwy/Peridot Plwy & SR 138/Lake Spivey
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Hannover Pkwy/Peridot Plwy Northbound					Hannover Pkwy/Peridot Plwy Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	5	0	22	0	27	22	4	15	0	41	6	275	7	0	288	26	336	13	0	375	731
7:45 AM	6	0	17	0	23	28	1	22	0	51	9	287	7	0	303	23	365	16	0	404	781
8:00 AM	4	2	15	0	21	11	2	17	0	30	12	239	9	0	260	27	320	12	0	359	670
8:15 AM	3	2	22	0	27	8	1	10	0	19	13	219	5	0	237	31	325	15	1	372	655
Total Volume	18	4	76	0	98	69	8	64	0	141	40	1020	28	0	1088	107	1346	56	1	1510	2837
% App. Total	18.4	4.1	77.6	0.0	100	48.9	5.7	45.4	0.0	100	3.7	93.8	2.6	0.0	100	7.1	89.1	3.7	0.1	100	
PHF					0.907					0.691					0.898					0.934	0.908
Cars, PU, Vans	18	4	76	0	98	69	8	64	0	141	40	1020	28	0	1088	107	1346	56	1	1510	2837
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

PM

	Hannover Pkwy/Peridot Plwy Northbound					Hannover Pkwy/Peridot Plwy Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	17	3	47	0	67	25	3	7	0	35	5	408	14	0	427	39	322	21	0	382	911
5:15 PM	18	8	46	0	72	20	5	19	0	44	10	419	11	0	440	52	366	26	0	444	1000
5:30 PM	15	7	53	0	75	15	2	8	0	25	15	401	15	0	431	49	375	19	0	443	974
5:45 PM	15	5	51	0	71	25	7	12	0	44	15	362	7	0	384	57	361	29	0	447	946
Total Volume	65	23	197	0	285	85	17	46	0	148	45	1590	47	0	1682	197	1424	95	0	1716	3831
% App. Total	22.8	8.1	69.1	0.0	100	57.4	11.5	31.1	0.0	100	2.7	94.5	2.8	0.0	100	11.5	83.0	5.5	0.0	100	
PHF					0.950					0.841					0.956					0.960	0.958
Cars, PU, Vans	65	23	197	0	285	85	17	46	0	148	45	1590	47	0	1682	197	1424	95	0	1716	3831
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-015
Location: Mt Zion Rd & SR 138/Lake Spivey Pkwy
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Mt Zion Rd Northbound						Mt Zion Rd Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	14	5	7	0	0	26	51	3	47	0	0	101	38	173	12	0	0	223	3	260	33	0	0	296	646
7:15 AM	24	6	11	0	0	41	42	4	68	0	0	114	31	183	15	0	0	229	5	272	46	0	0	323	707
7:30 AM	16	6	4	0	0	26	70	6	76	0	0	152	40	219	26	0	0	285	6	273	65	0	0	344	807
7:45 AM	23	8	7	1	0	39	59	6	48	0	0	113	35	257	17	0	0	309	11	322	37	0	0	370	831
Total	77	25	29	1	0	132	222	19	239	0	0	480	144	832	70	0	0	1046	25	1127	181	0	0	1333	2991
8:00 AM	13	8	8	0	0	29	26	11	38	0	0	75	31	201	26	0	0	258	9	274	50	0	0	333	695
8:15 AM	18	15	4	0	0	37	42	13	51	0	0	106	28	189	9	0	0	226	4	272	51	0	0	327	696
8:30 AM	20	11	6	0	0	37	42	16	38	0	0	96	20	182	23	0	0	225	4	238	55	0	0	297	655
8:45 AM	29	10	10	0	0	49	31	10	38	0	0	79	21	211	24	0	0	256	5	222	45	0	0	272	656
Total	80	44	28	0	0	152	141	50	165	0	0	356	100	783	82	0	0	965	22	1006	201	0	0	1229	2702
BREAK																									
4:00 PM	41	20	11	0	0	72	56	20	42	0	0	118	43	264	28	0	0	335	7	259	74	0	0	340	865
4:15 PM	30	14	17	0	0	61	69	30	44	0	0	143	45	307	37	0	0	389	2	295	66	0	0	363	956
4:30 PM	36	25	5	0	0	66	55	11	43	0	0	109	32	311	42	0	0	385	4	269	62	0	0	335	895
4:45 PM	29	21	7	0	0	57	68	24	37	0	0	129	37	319	42	0	0	398	11	260	83	0	0	354	938
Total	136	80	40	0	0	256	248	85	166	0	0	499	157	1201	149	0	0	1507	24	1083	285	0	0	1392	3654
5:00 PM	34	19	10	0	0	63	88	19	44	0	0	151	39	323	45	1	0	408	13	230	77	0	0	320	942
5:15 PM	37	22	8	0	0	67	81	16	37	0	0	134	41	355	56	0	0	452	13	304	73	1	0	391	1044
5:30 PM	31	25	12	0	0	68	70	25	50	0	0	145	50	336	36	0	0	422	14	280	89	0	0	383	1018
5:45 PM	46	21	10	0	0	77	74	19	42	0	0	135	44	244	31	1	0	320	7	306	64	0	0	377	909
Total	148	87	40	0	0	275	313	79	173	0	0	565	174	1258	168	2	0	1602	47	1120	303	1	0	1471	3913
Grand Total	441	236	137	1	0	815	924	233	743	0	0	1900	575	4074	469	2	0	5120	118	4336	970	1	0	5425	13260
Apprch %	54.1	29.0	16.8	0.1	0.0		48.6	12.3	39.1	0.0	0.0		11.2	79.6	9.2	0.0	0.0		2.2	79.9	17.9	0.0	0.0		
Total %	3.3	1.8	1.0	0.0	0.0	6.1	7.0	1.8	5.6	0.0	0.0	14.3	4.3	30.7	3.5	0.0	0.0	38.6	0.9	32.7	7.3	0.0	0.0	40.9	
Cars, PU, Vans	441	236	137	1	0	815	924	233	743		0	1900	575	4074	469	2		5120	118	4336	970		0	5425	13260
% Cars, PU, Vans	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-015
Location: Mt Zion Rd & SR 138/Lake Spivey Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Mt Zion Rd Northbound					Mt Zion Rd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	24	6	11	0	41	42	4	68	0	114	31	183	15	0	229	5	272	46	0	323	707
7:30 AM	16	6	4	0	26	70	6	76	0	152	40	219	26	0	285	6	273	65	0	344	807
7:45 AM	23	8	7	1	39	59	6	48	0	113	35	257	17	0	309	11	322	37	0	370	831
8:00 AM	13	8	8	0	29	26	11	38	0	75	31	201	26	0	258	9	274	50	0	333	695
Total Volume	76	28	30	1	135	197	27	230	0	454	137	860	84	0	1081	31	1141	198	0	1370	3040
% App. Total	56.3	20.7	22.2	0.7	100	43.4	5.9	50.7	0.0	100	12.7	79.6	7.8	0.0	100	2.3	83.3	14.5	0.0	100	
PHF					0.823					0.747					0.875					0.926	0.915
Cars, PU, Vans	76	28	30	1	135	197	27	230	0	454	137	860	84	0	1081	31	1141	198	0	1370	3040
% Cars, PU, Vans	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Mt Zion Rd Northbound					Mt Zion Rd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	29	21	7	0	57	68	24	37	0	129	37	319	42	0	398	11	260	83	0	354	938
5:00 PM	34	19	10	0	63	88	19	44	0	151	39	323	45	1	408	13	230	77	0	320	942
5:15 PM	37	22	8	0	67	81	16	37	0	134	41	355	56	0	452	13	304	73	1	391	1044
5:30 PM	31	25	12	0	68	70	25	50	0	145	50	336	36	0	422	14	280	89	0	383	1018
Total Volume	131	87	37	0	255	307	84	168	0	559	167	1333	179	1	1680	51	1074	322	1	1448	3942
% App. Total	51.4	34.1	14.5	0.0	100	54.9	15.0	30.1	0.0	100	9.9	79.3	10.7	0.1	100	3.5	74.2	22.2	0.1	100	
PHF					0.938					0.925					0.929					0.926	0.944
Cars, PU, Vans	131	87	37	0	255	307	84	168	0	559	167	1333	179	1	1680	51	1074	322	1	1448	3942
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Project ID: 19-09344-016
Location: I-75 NB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	I-75 NB Ramps Northbound						I-75 NB Ramps Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	58	0	34	0	0	92	0	0	0	0	0	0	112	198	0	3	0	313	0	172	164	0	0	336	741
7:15 AM	58	1	33	0	0	92	0	0	0	0	0	0	147	200	0	1	0	348	0	194	172	0	0	366	806
7:30 AM	65	0	44	0	0	109	0	0	0	0	0	0	155	257	0	2	0	414	0	207	149	0	0	356	879
7:45 AM	64	0	47	0	0	111	0	0	0	0	0	0	131	290	0	3	0	424	0	247	172	0	0	419	954
Total	245	1	158	0	0	404	0	0	0	0	0	0	545	945	0	9	0	1499	0	820	657	0	0	1477	3380
8:00 AM	62	0	53	0	0	115	0	0	0	0	0	0	125	233	0	2	0	360	0	211	131	0	0	342	817
8:15 AM	61	0	33	0	0	94	0	0	0	0	0	0	107	229	0	3	0	339	0	211	152	0	0	363	796
8:30 AM	64	0	33	0	0	97	0	0	0	0	0	0	100	197	0	1	0	298	0	175	131	0	0	306	701
8:45 AM	51	1	31	0	0	83	0	0	0	0	0	0	108	242	0	0	0	350	0	161	146	0	0	307	740
Total	238	1	150	0	0	389	0	0	0	0	0	0	440	901	0	6	0	1347	0	758	560	0	0	1318	3054
BREAK																									
4:00 PM	44	0	46	0	0	90	0	0	0	0	0	0	57	288	0	0	0	345	0	228	108	0	0	336	771
4:15 PM	37	0	33	0	0	70	0	0	0	0	0	0	52	383	0	2	0	437	0	255	131	0	0	386	893
4:30 PM	33	0	31	0	0	64	0	0	0	0	0	0	59	380	0	0	0	439	0	249	117	0	0	366	869
4:45 PM	42	1	25	0	0	68	0	0	0	0	0	0	47	392	0	2	0	441	0	219	112	0	0	331	840
Total	156	1	135	0	0	292	0	0	0	0	0	0	215	1443	0	4	0	1662	0	951	468	0	0	1419	3373
5:00 PM	41	0	34	0	0	75	0	0	0	0	0	0	57	418	0	1	0	476	0	254	77	0	0	331	882
5:15 PM	48	0	37	0	0	85	0	0	0	0	0	0	75	441	0	4	0	520	0	269	123	0	0	392	997
5:30 PM	57	0	41	0	0	98	0	0	0	0	0	0	41	419	0	0	0	460	0	272	94	0	0	366	924
5:45 PM	45	0	27	0	0	72	0	0	0	0	0	0	60	298	0	2	0	360	0	294	123	0	0	417	849
Total	191	0	139	0	0	330	0	0	0	0	0	0	233	1576	0	7	0	1816	0	1089	417	0	0	1506	3652
Grand Total	830	3	582	0	0	1415	0	0	0	0	0	0	1433	4865	0	26	0	6324	0	3618	2102	0	0	5720	13459
Apprch %	58.7	0.2	41.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0		22.7	76.9	0.0	0.4	0.0		0.0	63.3	36.7	0.0	0.0		
Total %	6.2	0.0	4.3	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	10.6	36.1	0.0	0.2	0.0	47.0	0.0	26.9	15.6	0.0	0.0	42.5	
Cars, PU, Vans	830	3	582	0	0	1415	0	0	0		0	0	1433	4865	0	26		6324	0	3618	2102		0	5720	13459
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-016
Location: I-75 NB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	I-75 NB Ramps Northbound					I-75 NB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	58	1	33	0	92	0	0	0	0	0	147	200	0	1	348	0	194	172	0	366	806
7:30 AM	65	0	44	0	109	0	0	0	0	0	155	257	0	2	414	0	207	149	0	356	879
7:45 AM	64	0	47	0	111	0	0	0	0	0	131	290	0	3	424	0	247	172	0	419	954
8:00 AM	62	0	53	0	115	0	0	0	0	0	125	233	0	2	360	0	211	131	0	342	817
Total Volume	249	1	177	0	427	0	0	0	0	0	558	980	0	8	1546	0	859	624	0	1483	3456
% App. Total	58.3	0.2	41.5	0.0	100	0.0	0.0	0.0	0.0	0	36.1	63.4	0.0	0.5	100	0.0	57.9	42.1	0.0	100	
PHF					0.928										0.912					0.885	0.906
Cars, PU, Vans	249	1	177	0	427	0	0	0	0	0	558	980	0	8	1546	0	859	624	0	1483	3456
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

PM

	I-75 NB Ramps Northbound					I-75 NB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	41	0	34	0	75	0	0	0	0	0	57	418	0	1	476	0	254	77	0	331	882
5:15 PM	48	0	37	0	85	0	0	0	0	0	75	441	0	4	520	0	269	123	0	392	997
5:30 PM	57	0	41	0	98	0	0	0	0	0	41	419	0	0	460	0	272	94	0	366	924
5:45 PM	45	0	27	0	72	0	0	0	0	0	60	298	0	2	360	0	294	123	0	417	849
Total Volume	191	0	139	0	330	0	0	0	0	0	233	1576	0	7	1816	0	1089	417	0	1506	3652
% App. Total	57.9	0.0	42.1	0.0	100	0.0	0.0	0.0	0.0	0	12.8	86.8	0.0	0.4	100	0.0	72.3	27.7	0.0	100	
PHF					0.842										0.873					0.903	0.916
Cars, PU, Vans	191	0	139	0	330	0	0	0	0	0	233	1576	0	7	1816	0	1089	417	0	1506	3652
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-017
Location: I-75 SB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	I-75 SB Ramps Northbound						I-75 SB Ramps Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	72	0	44	0	0	116	0	222	42	0	0	264	21	178	0	2	0	201	581
7:15 AM	0	0	0	0	0	0	66	0	51	0	0	117	0	295	60	0	0	355	21	200	0	1	0	222	694
7:30 AM	0	0	0	0	0	0	91	0	49	0	0	140	0	315	76	0	0	391	26	231	0	1	0	258	789
7:45 AM	0	0	0	0	0	0	78	0	57	0	0	135	0	334	78	0	0	412	32	292	0	1	0	325	872
Total	0	0	0	0	0	0	307	0	201	0	0	508	0	1166	256	0	0	1422	100	901	0	5	0	1006	2936
8:00 AM	0	0	0	0	0	0	86	1	61	0	0	148	0	286	51	0	0	337	17	249	0	1	0	267	752
8:15 AM	0	0	0	0	0	0	82	0	65	0	0	147	0	253	63	0	0	316	23	235	0	2	0	260	723
8:30 AM	0	0	0	0	0	0	82	2	46	0	0	130	0	222	61	0	0	283	22	219	0	3	0	244	657
8:45 AM	0	0	0	0	0	0	78	0	49	0	0	127	0	282	49	0	0	331	28	186	0	1	0	215	673
Total	0	0	0	0	0	0	328	3	221	0	0	552	0	1043	224	0	0	1267	90	889	0	7	0	986	2805
BREAK																									
4:00 PM	0	0	0	0	0	0	126	0	103	0	0	229	0	233	57	0	0	290	34	252	0	0	0	286	805
4:15 PM	0	0	0	0	0	0	157	1	121	0	0	279	0	273	70	0	0	343	32	261	0	5	0	298	920
4:30 PM	0	0	0	0	0	0	154	1	104	0	0	259	0	270	68	0	0	338	35	266	0	1	0	302	899
4:45 PM	0	0	0	0	0	0	153	1	112	0	0	266	0	290	70	0	0	360	21	238	0	2	0	261	887
Total	0	0	0	0	0	0	590	3	440	0	0	1033	0	1066	265	0	0	1331	122	1017	0	8	0	1147	3511
5:00 PM	0	0	0	0	0	0	182	0	155	0	0	337	0	279	71	0	0	350	32	285	0	6	0	323	1010
5:15 PM	0	0	0	0	0	0	207	4	163	0	0	374	0	316	62	0	0	378	36	289	0	4	0	329	1081
5:30 PM	0	0	0	0	0	0	216	1	181	0	0	398	0	253	47	0	0	300	36	325	0	5	0	366	1064
5:45 PM	0	0	0	0	0	0	121	1	117	0	0	239	0	236	59	0	0	295	36	312	0	5	0	353	887
Total	0	0	0	0	0	0	726	6	616	0	0	1348	0	1084	239	0	0	1323	140	1211	0	20	0	1371	4042
Grand Total	0	0	0	0	0	0	1951	12	1478	0	0	3441	0	4359	984	0	0	5343	452	4018	0	40	0	4510	13294
Apprch %	0.0	0.0	0.0	0.0	0.0		56.7	0.3	43.0	0.0	0.0		0.0	81.6	18.4	0.0	0.0		10.0	89.1	0.0	0.9	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	14.7	0.1	11.1	0.0	0.0	25.9	0.0	32.8	7.4	0.0	0.0	40.2	3.4	30.2	0.0	0.3	0.0	33.9	
Cars, PU, Vans	0	0	0	0	0	0	1951	12	1478		0	3441	0	4359	984	0		5343	452	4018	0		0	4510	13294
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-017
Location: I-75 SB Ramps & SR 138/Lake Spivey Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	I-75 SB Ramps Northbound					I-75 SB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0	0	91	0	49	0	140	0	315	76	0	391	26	231	0	1	258	789
7:45 AM	0	0	0	0	0	78	0	57	0	135	0	334	78	0	412	32	292	0	1	325	872
8:00 AM	0	0	0	0	0	86	1	61	0	148	0	286	51	0	337	17	249	0	1	267	752
8:15 AM	0	0	0	0	0	82	0	65	0	147	0	253	63	0	316	23	235	0	2	260	723
Total Volume	0	0	0	0	0	337	1	232	0	570	0	1188	268	0	1456	98	1007	0	5	1110	3136
% App. Total	0.0	0.0	0.0	0.0	0	59.1	0.2	40.7	0.0	100	0.0	81.6	18.4	0.0	100	8.8	90.7	0.0	0.5	100	
PHF										0.963					0.883					0.854	0.899
Cars, PU, Vans	0	0	0	0	0	337	1	232	0	570	0	1188	268	0	1456	98	1007	0	5	1110	3136
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0

PM

	I-75 SB Ramps Northbound					I-75 SB Ramps Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	0	0	0	0	0	153	1	112	0	266	0	290	70	0	360	21	238	0	2	261	887
5:00 PM	0	0	0	0	0	182	0	155	0	337	0	279	71	0	350	32	285	0	6	323	1010
5:15 PM	0	0	0	0	0	207	4	163	0	374	0	316	62	0	378	36	289	0	4	329	1081
5:30 PM	0	0	0	0	0	216	1	181	0	398	0	253	47	0	300	36	325	0	5	366	1064
Total Volume	0	0	0	0	0	758	6	611	0	1375	0	1138	250	0	1388	125	1137	0	17	1279	4042
% App. Total	0.0	0.0	0.0	0.0	0	55.1	0.4	44.4	0.0	100	0.0	82.0	18.0	0.0	100	9.8	88.9	0.0	1.3	100	
PHF										0.864					0.918					0.874	0.935
Cars, PU, Vans	0	0	0	0	0	758	6	611	0	1375	0	1138	250	0	1388	125	1137	0	17	1279	4042
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0

Project ID: 19-09344-018
Location: Mt Zion Pkwy/Speer Rd & SR 138/Lake Spivey Pkwy **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Mt Zion Pkwy/Speer Rd Northbound						Mt Zion Pkwy/Speer Rd Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	8	37	115	0	0	160	18	15	8	0	0	41	10	141	15	0	0	166	35	164	14	5	0	218	585
7:15 AM	19	42	146	0	0	207	26	19	13	0	0	58	11	158	15	0	0	184	51	187	12	8	0	258	707
7:30 AM	12	34	169	1	0	216	24	12	15	0	0	51	14	193	13	0	0	220	39	192	27	11	0	269	756
7:45 AM	10	52	147	0	0	209	43	13	15	0	0	71	14	200	22	0	0	236	67	218	30	6	0	321	837
Total	49	165	577	1	0	792	111	59	51	0	0	221	49	692	65	0	0	806	192	761	83	30	0	1066	2885
8:00 AM	16	29	114	1	0	160	24	23	11	0	0	58	26	172	10	1	0	209	44	185	44	17	0	290	717
8:15 AM	18	45	105	0	0	168	39	19	17	0	0	75	19	155	19	1	0	194	74	166	45	8	0	293	730
8:30 AM	9	54	124	0	0	187	54	18	20	0	0	92	30	117	17	0	0	164	70	127	42	7	0	246	689
8:45 AM	19	38	115	0	0	172	43	19	18	0	0	80	19	143	15	0	0	177	45	122	40	13	0	220	649
Total	62	166	458	1	0	687	160	79	66	0	0	305	94	587	61	2	0	744	233	600	171	45	0	1049	2785
BREAK																									
4:00 PM	18	39	44	0	0	101	75	51	22	1	0	149	20	154	16	0	0	190	85	177	43	8	0	313	753
4:15 PM	13	41	41	0	0	95	97	71	32	0	0	200	28	174	18	0	0	220	103	191	46	11	0	351	866
4:30 PM	25	33	53	0	0	111	99	78	21	0	0	198	21	157	16	1	0	195	98	177	49	8	0	332	836
4:45 PM	28	34	52	0	0	114	78	70	14	0	0	162	29	175	20	0	0	224	110	170	41	11	0	332	832
Total	84	147	190	0	0	421	349	270	89	1	0	709	98	660	70	1	0	829	396	715	179	38	0	1328	3287
5:00 PM	18	32	70	1	0	121	84	78	29	0	0	191	31	189	22	0	0	242	126	190	49	11	0	376	930
5:15 PM	17	30	60	0	0	107	76	90	32	1	0	199	33	186	28	6	0	253	163	192	53	13	0	421	980
5:30 PM	11	34	52	0	0	97	76	60	35	0	0	171	29	141	24	0	0	194	175	222	69	15	0	481	943
5:45 PM	14	45	51	0	0	110	86	64	36	0	0	186	23	141	22	1	0	187	127	201	55	8	0	391	874
Total	60	141	233	1	0	435	322	292	132	1	0	747	116	657	96	7	0	876	591	805	226	47	0	1669	3727
Grand Total	255	619	1458	3	0	2335	942	700	338	2	0	1982	357	2596	292	10	0	3255	1412	2881	659	160	0	5112	12684
Apprch %	10.9	26.5	62.4	0.1	0.0		47.5	35.3	17.1	0.1	0.0		11.0	79.8	9.0	0.3	0.0		27.6	56.4	12.9	3.1	0.0		
Total %	2.0	4.9	11.5	0.0	0.0	18.4	7.4	5.5	2.7	0.0	0.0	15.6	2.8	20.5	2.3	0.1	0.0	25.7	11.1	22.7	5.2	1.3	0.0	40.3	
Cars, PU, Vans	255	619	1458	3	0	2335	942	700	338		0	1982	357	2596	292	10		3255	1412	2881	659		0	5112	12684
% Cars, PU, Vans	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-018
Location: Mt Zion Pkwy/Speer Rd & SR 138/Lake Spivey Pkw
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Mt Zion Pkwy/Speer Rd Northbound					Mt Zion Pkwy/Speer Rd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	12	34	169	1	216	24	12	15	0	51	14	193	13	0	220	39	192	27	11	269	756
7:45 AM	10	52	147	0	209	43	13	15	0	71	14	200	22	0	236	67	218	30	6	321	837
8:00 AM	16	29	114	1	160	24	23	11	0	58	26	172	10	1	209	44	185	44	17	290	717
8:15 AM	18	45	105	0	168	39	19	17	0	75	19	155	19	1	194	74	166	45	8	293	730
Total Volume	56	160	535	2	753	130	67	58	0	255	73	720	64	2	859	224	761	146	42	1173	3040
% App. Total	7.4	21.2	71.0	0.3	100	51.0	26.3	22.7	0.0	100	8.5	83.8	7.5	0.2	100	19.1	64.9	12.4	3.6	100	
PHF					0.872					0.850					0.910					0.914	0.908
Cars, PU, Vans	56	160	535	2	753	130	67	58	0	255	73	720	64	2	859	224	761	146	42	1173	3040
% Cars, PU, Vans	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

PM

	Mt Zion Pkwy/Speer Rd Northbound					Mt Zion Pkwy/Speer Rd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	18	32	70	1	121	84	78	29	0	191	31	189	22	0	242	126	190	49	11	376	930
5:15 PM	17	30	60	0	107	76	90	32	1	199	33	186	28	6	253	163	192	53	13	421	980
5:30 PM	11	34	52	0	97	76	60	35	0	171	29	141	24	0	194	175	222	69	15	481	943
5:45 PM	14	45	51	0	110	86	64	36	0	186	23	141	22	1	187	127	201	55	8	391	874
Total Volume	60	141	233	1	435	322	292	132	1	747	116	657	96	7	876	591	805	226	47	1669	3727
% App. Total	13.8	32.4	53.6	0.2	100	43.1	39.1	17.7	0.1	100	13.2	75.0	11.0	0.8	100	35.4	48.2	13.5	2.8	100	
PHF					0.899					0.938					0.866					0.867	0.951
Cars, PU, Vans	60	141	233	1	435	322	292	132	1	747	116	657	96	7	876	591	805	226	47	1669	3727
% Cars, PU, Vans	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Project ID: 19-09344-019
Location: Spivey Rd & SR 138/Lake Spivey Pkwy
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Spivey Rd Northbound						Spivey Rd Southbound						SR 138/Lake Spivey Pkwy Eastbound						SR 138/Lake Spivey Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	7	0	48	0	0	55	0	0	0	0	0	0	0	104	2	0	0	106	23	161	0	0	0	184	345
7:15 AM	5	0	57	0	0	62	0	0	0	0	0	0	0	125	2	0	0	127	22	183	0	0	0	205	394
7:30 AM	7	0	73	0	0	80	0	0	0	0	0	0	0	146	4	0	0	150	12	203	0	0	0	215	445
7:45 AM	8	0	55	0	0	63	0	0	0	0	0	0	0	175	2	0	0	177	27	216	0	1	0	244	484
Total	27	0	233	0	0	260	0	0	0	0	0	0	0	550	10	0	0	560	84	763	0	1	0	848	1668
8:00 AM	7	0	67	0	0	74	0	0	0	0	0	0	0	139	4	1	0	144	18	172	0	1	0	191	409
8:15 AM	8	0	39	0	0	47	0	0	0	0	0	0	0	154	2	0	0	156	25	166	0	1	0	192	395
8:30 AM	4	0	43	0	0	47	0	0	0	0	0	0	0	112	2	0	0	114	22	120	0	0	0	142	303
8:45 AM	4	0	38	0	0	42	0	0	0	0	0	0	0	133	4	1	0	138	25	136	0	0	0	161	341
Total	23	0	187	0	0	210	0	0	0	0	0	0	0	538	12	2	0	552	90	594	0	2	0	686	1448
BREAK																									
4:00 PM	5	0	33	0	0	38	0	0	0	0	0	0	0	153	13	0	0	166	51	156	0	6	0	213	417
4:15 PM	2	0	37	0	0	39	0	0	0	0	0	0	0	147	9	0	0	156	50	168	0	12	0	230	425
4:30 PM	7	0	27	0	0	34	0	0	0	0	0	0	0	157	5	0	0	162	57	152	0	6	0	215	411
4:45 PM	7	0	31	0	0	38	0	0	0	0	0	0	0	191	11	0	0	202	40	165	0	10	0	215	455
Total	21	0	128	0	0	149	0	0	0	0	0	0	0	648	38	0	0	686	198	641	0	34	0	873	1708
5:00 PM	6	0	37	0	0	43	0	0	0	0	0	0	0	205	10	0	0	215	59	171	0	5	0	235	493
5:15 PM	5	0	43	0	0	48	0	0	0	0	0	0	0	185	10	0	0	195	67	169	0	6	0	242	485
5:30 PM	1	0	35	0	0	36	0	0	0	0	0	0	0	135	13	0	0	148	71	170	0	17	0	258	442
5:45 PM	3	0	40	0	0	43	0	0	0	0	0	0	0	139	11	0	0	150	77	170	0	7	0	254	447
Total	15	0	155	0	0	170	0	0	0	0	0	0	0	664	44	0	0	708	274	680	0	35	0	989	1867
Grand Total	86	0	703	0	0	789	0	0	0	0	0	0	0	2400	104	2	0	2506	646	2678	0	72	0	3396	6691
Apprch %	10.9	0.0	89.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	95.8	4.2	0.1	0.0		19.0	78.9	0.0	2.1	0.0		
Total %	1.3	0.0	10.5	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.9	1.6	0.0	0.0	37.5	9.7	40.0	0.0	1.1	0.0	50.8	
Cars, PU, Vans	86	0	703	0	0	789	0	0	0		0	0	0	2400	104	2		2506	646	2678	0		0	3396	6691
% Cars, PU, Vans	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-019
Location: Spivey Rd & SR 138/Lake Spivey Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Spivey Rd Northbound					Spivey Rd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	7	0	73	0	80	0	0	0	0	0	0	146	4	0	150	12	203	0	0	215	445
7:45 AM	8	0	55	0	63	0	0	0	0	0	0	175	2	0	177	27	216	0	1	244	484
8:00 AM	7	0	67	0	74	0	0	0	0	0	0	139	4	1	144	18	172	0	1	191	409
8:15 AM	8	0	39	0	47	0	0	0	0	0	0	154	2	0	156	25	166	0	1	192	395
Total Volume	30	0	234	0	264	0	0	0	0	0	0	614	12	1	627	82	757	0	3	842	1733
% App. Total	11.4	0.0	88.6	0.0	100	0.0	0.0	0.0	0.0	0	0.0	97.9	1.9	0.2	100	9.7	89.9	0.0	0.4	100	
PHF					0.825										0.886					0.863	0.895
Cars, PU, Vans	30	0	234	0	264	0	0	0	0	0	0	614	12	1	627	82	757	0	3	842	1733
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0

PM

	Spivey Rd Northbound					Spivey Rd Southbound					SR 138/Lake Spivey Pkwy Eastbound					SR 138/Lake Spivey Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	7	0	31	0	38	0	0	0	0	0	0	191	11	0	202	40	165	0	10	215	455
5:00 PM	6	0	37	0	43	0	0	0	0	0	0	205	10	0	215	59	171	0	5	235	493
5:15 PM	5	0	43	0	48	0	0	0	0	0	0	185	10	0	195	67	169	0	6	242	485
5:30 PM	1	0	35	0	36	0	0	0	0	0	0	135	13	0	148	71	170	0	17	258	442
Total Volume	19	0	146	0	165	0	0	0	0	0	0	716	44	0	760	237	675	0	38	950	1875
% App. Total	11.5	0.0	88.5	0.0	100	0.0	0.0	0.0	0.0	0	0.0	94.2	5.8	0.0	100	24.9	71.1	0.0	4.0	100	
PHF					0.859										0.884					0.921	0.951
Cars, PU, Vans	19	0	146	0	165	0	0	0	0	0	0	716	44	0	760	237	675	0	38	950	1875
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0

Project ID: 19-09344-020
Location: Spivey Rd & Walt Stephens Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Spivey Rd Northbound						Spivey Rd Southbound						Walt Stephens Rd Eastbound						Walt Stephens Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	3	0	12	0	0	15	29	44	0	0	0	73	0	47	7	0	0	54	142
7:15 AM	0	0	0	0	0	0	20	0	18	0	0	38	28	54	0	0	0	82	0	68	5	0	0	73	193
7:30 AM	0	0	0	0	0	0	31	0	31	0	0	62	72	105	0	0	0	177	0	99	38	0	0	137	376
7:45 AM	0	0	0	0	0	0	8	0	16	0	0	24	32	52	0	0	0	84	0	66	25	0	0	91	199
Total	0	0	0	0	0	0	62	0	77	0	0	139	161	255	0	0	0	416	0	280	75	0	0	355	910
8:00 AM	0	0	0	0	0	0	4	0	12	0	0	16	32	36	0	0	0	68	0	47	13	0	0	60	144
8:15 AM	0	1	0	0	0	1	6	0	13	0	0	19	22	44	0	0	0	66	0	53	11	0	0	64	150
8:30 AM	0	0	0	0	0	0	8	0	13	0	0	21	21	45	0	0	0	66	0	46	5	0	0	51	138
8:45 AM	0	0	0	0	0	0	4	0	7	0	0	11	23	42	0	0	0	65	0	48	3	0	0	51	127
Total	0	1	0	0	0	1	22	0	45	0	0	67	98	167	0	0	0	265	0	194	32	0	0	226	559
BREAK																									
4:00 PM	0	0	0	0	0	0	13	0	23	0	0	36	15	69	0	0	0	84	0	50	10	0	0	60	180
4:15 PM	0	0	0	0	0	0	8	0	27	0	0	35	13	78	0	0	0	91	0	64	9	0	0	73	199
4:30 PM	0	0	0	0	0	0	9	1	37	0	0	47	15	78	0	0	0	93	0	60	18	0	0	78	218
4:45 PM	0	0	0	0	0	0	18	1	25	0	0	44	18	76	0	0	0	94	0	61	8	0	0	69	207
Total	0	0	0	0	0	0	48	2	112	0	0	162	61	301	0	0	0	362	0	235	45	0	0	280	804
5:00 PM	1	0	0	0	0	1	23	0	31	0	0	54	19	101	0	0	0	120	0	48	16	0	0	64	239
5:15 PM	0	0	0	0	0	0	19	1	38	0	0	58	26	100	0	0	0	126	0	75	12	0	0	87	271
5:30 PM	1	0	0	0	0	1	15	0	41	0	0	56	27	88	0	0	0	115	0	56	11	0	0	67	239
5:45 PM	0	0	0	0	0	0	17	0	46	0	0	63	22	69	0	0	0	91	0	67	10	0	0	77	231
Total	2	0	0	0	0	2	74	1	156	0	0	231	94	358	0	0	0	452	0	246	49	0	0	295	980
Grand Total	2	1	0	0	0	3	206	3	390	0	0	599	414	1081	0	0	0	1495	0	955	201	0	0	1156	3253
Apprch %	66.7	33.3	0.0	0.0	0.0		34.4	0.5	65.1	0.0	0.0		27.7	72.3	0.0	0.0	0.0		0.0	82.6	17.4	0.0	0.0		
Total %	0.1	0.0	0.0	0.0	0.0	0.1	6.3	0.1	12.0	0.0	0.0	18.4	12.7	33.2	0.0	0.0	0.0	46.0	0.0	29.4	6.2	0.0	0.0	35.5	
Cars, PU, Vans	2	1	0	0	0	3	206	3	390		0	599	414	1081	0	0		1495	0	955	201		0	1156	3253
% Cars, PU, Vans	100.0	100.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-020
Location: Spivey Rd & Walt Stephens Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Spivey Rd Northbound					Spivey Rd Southbound					Walt Stephens Rd Eastbound					Walt Stephens Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	0	0	0	0	20	0	18	0	38	28	54	0	0	82	0	68	5	0	73	193
7:30 AM	0	0	0	0	0	31	0	31	0	62	72	105	0	0	177	0	99	38	0	137	376
7:45 AM	0	0	0	0	0	8	0	16	0	24	32	52	0	0	84	0	66	25	0	91	199
8:00 AM	0	0	0	0	0	4	0	12	0	16	32	36	0	0	68	0	47	13	0	60	144
Total Volume	0	0	0	0	0	63	0	77	0	140	164	247	0	0	411	0	280	81	0	361	912
% App. Total	0.0	0.0	0.0	0.0	0	45.0	0.0	55.0	0.0	100	39.9	60.1	0.0	0.0	100	0.0	77.6	22.4	0.0	100	
PHF										0.565					0.581					0.659	0.606
Cars, PU, Vans	0	0	0	0	0	63	0	77	0	140	164	247	0	0	411	0	280	81	0	361	912
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

PM

	Spivey Rd Northbound					Spivey Rd Southbound					Walt Stephens Rd Eastbound					Walt Stephens Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	1	0	0	0	1	23	0	31	0	54	19	101	0	0	120	0	48	16	0	64	239
5:15 PM	0	0	0	0	0	19	1	38	0	58	26	100	0	0	126	0	75	12	0	87	271
5:30 PM	1	0	0	0	1	15	0	41	0	56	27	88	0	0	115	0	56	11	0	67	239
5:45 PM	0	0	0	0	0	17	0	46	0	63	22	69	0	0	91	0	67	10	0	77	231
Total Volume	2	0	0	0	2	74	1	156	0	231	94	358	0	0	452	0	246	49	0	295	980
% App. Total	100.0	0.0	0.0	0.0	100	32.0	0.4	67.5	0.0	100	20.8	79.2	0.0	0.0	100	0.0	83.4	16.6	0.0	100	
PHF					0.500					0.917					0.897					0.848	0.904
Cars, PU, Vans	2	0	0	0	2	74	1	156	0	231	94	358	0	0	452	0	246	49	0	295	980
% Cars, PU, Vans	100.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-021
Location: Speer Rd/Blackhall Rd & Walt Stephens Rd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Speer Rd/Blackhall Rd Northbound						Speer Rd/Blackhall Rd Southbound						Walt Stephens Rd Eastbound						Walt Stephens Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	2	62	18	0	0	82	31	12	0	0	0	43	4	43	6	0	0	53	9	54	112	0	0	175	353
7:15 AM	7	65	20	0	0	92	50	16	2	0	0	68	4	65	8	0	0	77	23	68	128	0	0	219	456
7:30 AM	4	86	18	0	0	108	28	14	4	0	0	46	9	55	19	0	0	83	30	73	143	0	0	246	483
7:45 AM	17	68	23	0	0	108	41	14	4	0	0	59	7	44	10	0	0	61	22	60	112	0	0	194	422
Total	30	281	79	0	0	390	150	56	10	0	0	216	24	207	43	0	0	274	84	255	495	0	0	834	1714
8:00 AM	10	72	13	0	0	95	34	17	2	0	0	53	5	36	6	0	0	47	13	37	82	0	0	132	327
8:15 AM	10	68	13	0	0	91	37	18	4	0	0	59	4	45	7	0	0	56	19	45	86	0	0	150	356
8:30 AM	4	60	18	0	0	82	26	23	3	0	0	52	3	42	10	0	0	55	9	37	85	0	0	131	320
8:45 AM	9	63	14	0	0	86	25	15	2	0	0	42	6	42	2	0	0	50	10	46	81	0	0	137	315
Total	33	263	58	0	0	354	122	73	11	0	0	206	18	165	25	0	0	208	51	165	334	0	0	550	1318
BREAK																									
4:00 PM	10	28	18	0	0	56	97	45	4	0	0	146	10	61	11	0	0	82	18	53	51	0	0	122	406
4:15 PM	12	34	21	0	0	67	104	70	4	0	0	178	5	77	8	0	0	90	18	60	48	0	0	126	461
4:30 PM	12	34	16	0	0	62	102	67	7	0	0	176	5	76	9	0	0	90	26	54	57	0	0	137	465
4:45 PM	11	34	24	0	0	69	112	67	2	0	0	181	8	83	9	0	0	100	32	59	64	0	0	155	505
Total	45	130	79	0	0	254	415	249	17	0	0	681	28	297	37	0	0	362	94	226	220	0	0	540	1837
5:00 PM	12	33	17	0	0	62	132	84	5	0	0	221	9	89	13	0	0	111	18	60	65	0	0	143	537
5:15 PM	8	34	12	0	0	54	129	83	5	0	0	217	7	101	20	0	0	128	26	62	56	0	0	144	543
5:30 PM	5	36	19	0	0	60	140	95	1	0	0	236	3	84	11	0	0	98	25	62	55	0	0	142	536
5:45 PM	10	39	30	0	0	79	134	84	4	0	0	222	5	75	20	0	0	100	23	66	54	0	0	143	544
Total	35	142	78	0	0	255	535	346	15	0	0	896	24	349	64	0	0	437	92	250	230	0	0	572	2160
Grand Total	143	816	294	0	0	1253	1222	724	53	0	0	1999	94	1018	169	0	0	1281	321	896	1279	0	0	2496	7029
Apprch %	11.4	65.1	23.5	0.0	0.0		61.1	36.2	2.7	0.0	0.0		7.3	79.5	13.2	0.0	0.0		12.9	35.9	51.2	0.0	0.0		
Total %	2.0	11.6	4.2	0.0	0.0	17.8	17.4	10.3	0.8	0.0	0.0	28.4	1.3	14.5	2.4	0.0	0.0	18.2	4.6	12.7	18.2	0.0	0.0	35.5	
Cars, PU, Vans	143	816	294	0	0	1253	1222	724	53		0	1999	94	1018	169	0		1281	321	896	1279		0	2496	7029
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-021
Location: Speer Rd/Blackhall Rd & Walt Stephens Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Speer Rd/Blackhall Rd Northbound					Speer Rd/Blackhall Rd Southbound					Walt Stephens Rd Eastbound					Walt Stephens Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	2	62	18	0	82	31	12	0	0	43	4	43	6	0	53	9	54	112	0	175	353
7:15 AM	7	65	20	0	92	50	16	2	0	68	4	65	8	0	77	23	68	128	0	219	456
7:30 AM	4	86	18	0	108	28	14	4	0	46	9	55	19	0	83	30	73	143	0	246	483
7:45 AM	17	68	23	0	108	41	14	4	0	59	7	44	10	0	61	22	60	112	0	194	422
Total Volume	30	281	79	0	390	150	56	10	0	216	24	207	43	0	274	84	255	495	0	834	1714
% App. Total	7.7	72.1	20.3	0.0	100	69.4	25.9	4.6	0.0	100	8.8	75.5	15.7	0.0	100	10.1	30.6	59.4	0.0	100	
PHF					0.903					0.794					0.825					0.848	0.887
Cars, PU, Vans	30	281	79	0	390	150	56	10	0	216	24	207	43	0	274	84	255	495	0	834	1714
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Speer Rd/Blackhall Rd Northbound					Speer Rd/Blackhall Rd Southbound					Walt Stephens Rd Eastbound					Walt Stephens Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	12	33	17	0	62	132	84	5	0	221	9	89	13	0	111	18	60	65	0	143	537
5:15 PM	8	34	12	0	54	129	83	5	0	217	7	101	20	0	128	26	62	56	0	144	543
5:30 PM	5	36	19	0	60	140	95	1	0	236	3	84	11	0	98	25	62	55	0	142	536
5:45 PM	10	39	30	0	79	134	84	4	0	222	5	75	20	0	100	23	66	54	0	143	544
Total Volume	35	142	78	0	255	535	346	15	0	896	24	349	64	0	437	92	250	230	0	572	2160
% App. Total	13.7	55.7	30.6	0.0	100	59.7	38.6	1.7	0.0	100	5.5	79.9	14.6	0.0	100	16.1	43.7	40.2	0.0	100	
PHF					0.807					0.949					0.854					0.993	0.993
Cars, PU, Vans	35	142	78	0	255	535	346	15	0	896	24	349	64	0	437	92	250	230	0	572	2160
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-022
Location: Brentwood Pkwy/Monarch Village Way & Walt Stephens Rd **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Brentwood Pkwy/Monarch Village Way Northbound						Brentwood Pkwy/Monarch Village Way Southbound						Walt Stephens Rd Eastbound						Walt Stephens Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	38	3	14	0	0	55	9	6	25	0	0	40	4	72	26	0	0	102	38	126	7	0	0	171	368
7:15 AM	60	6	38	0	0	104	21	20	27	0	0	68	7	78	30	0	0	115	45	148	9	0	0	202	489
7:30 AM	71	13	54	0	0	138	14	15	28	0	0	57	2	63	24	0	0	89	33	152	13	0	0	198	482
7:45 AM	36	6	31	0	0	73	16	0	27	0	0	43	8	88	8	0	0	104	5	145	9	0	0	159	379
Total	205	28	137	0	0	370	60	41	107	0	0	208	21	301	88	0	0	410	121	571	38	0	0	730	1718
8:00 AM	20	4	3	0	0	27	11	1	13	0	0	25	9	72	6	0	0	87	10	101	12	0	0	123	262
8:15 AM	12	4	7	0	0	23	7	3	27	0	0	37	11	70	5	0	0	86	2	109	8	0	0	119	265
8:30 AM	17	1	4	0	0	22	12	0	15	0	0	27	7	72	7	0	0	86	5	108	13	0	0	126	261
8:45 AM	14	1	4	0	0	19	8	0	21	0	0	29	3	73	5	0	0	81	3	99	10	0	0	112	241
Total	63	10	18	0	0	91	38	4	76	0	0	118	30	287	23	0	0	340	20	417	43	0	0	480	1029
BREAK																									
4:00 PM	17	3	19	0	0	39	13	0	18	0	0	31	24	132	22	0	0	178	4	79	14	0	0	97	345
4:15 PM	15	5	5	0	0	25	12	4	20	0	0	36	21	138	19	0	0	178	11	99	15	0	0	125	364
4:30 PM	15	2	17	0	0	34	12	3	12	0	0	27	19	146	22	0	0	187	4	109	16	0	0	129	377
4:45 PM	16	5	10	0	0	31	21	2	19	0	0	42	24	176	24	0	0	224	3	108	29	0	0	140	437
Total	63	15	51	0	0	129	58	9	69	0	0	136	88	592	87	0	0	767	22	395	74	0	0	491	1523
5:00 PM	22	4	10	0	0	36	13	4	18	0	0	35	26	183	26	0	0	235	5	108	30	0	0	143	449
5:15 PM	19	3	11	0	0	33	26	3	12	0	0	41	17	189	20	0	0	226	9	121	20	0	0	150	450
5:30 PM	14	3	11	0	0	28	16	1	12	0	0	29	21	217	22	0	0	260	9	101	26	0	0	136	453
5:45 PM	27	5	8	0	0	40	20	7	21	0	0	48	19	168	34	0	0	221	5	101	21	0	0	127	436
Total	82	15	40	0	0	137	75	15	63	0	0	153	83	757	102	0	0	942	28	431	97	0	0	556	1788
Grand Total	413	68	246	0	0	727	231	69	315	0	0	615	222	1937	300	0	0	2459	191	1814	252	0	0	2257	6058
Apprch %	56.8	9.4	33.8	0.0	0.0		37.6	11.2	51.2	0.0	0.0		9.0	78.8	12.2	0.0	0.0		8.5	80.4	11.2	0.0	0.0		
Total %	6.8	1.1	4.1	0.0	0.0	12.0	3.8	1.1	5.2	0.0	0.0	10.2	3.7	32.0	5.0	0.0	0.0	40.6	3.2	29.9	4.2	0.0	0.0	37.3	
Cars, PU, Vans	413	68	246	0	0	727	231	69	315		0	615	222	1937	300	0		2459	191	1814	252		0	2257	6058
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-022
Location: Brentwood Pkwy/Monarch Village Way & Walt Step
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	rentwood Pkwy/Monarch Village Wa Northbound					rentwood Pkwy/Monarch Village Wa Southbound					Walt Stephens Rd Eastbound					Walt Stephens Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	38	3	14	0	55	9	6	25	0	40	4	72	26	0	102	38	126	7	0	171	368
7:15 AM	60	6	38	0	104	21	20	27	0	68	7	78	30	0	115	45	148	9	0	202	489
7:30 AM	71	13	54	0	138	14	15	28	0	57	2	63	24	0	89	33	152	13	0	198	482
7:45 AM	36	6	31	0	73	16	0	27	0	43	8	88	8	0	104	5	145	9	0	159	379
Total Volume	205	28	137	0	370	60	41	107	0	208	21	301	88	0	410	121	571	38	0	730	1718
% App. Total	55.4	7.6	37.0	0.0	100	28.8	19.7	51.4	0.0	100	5.1	73.4	21.5	0.0	100	16.6	78.2	5.2	0.0	100	
PHF					0.670					0.765					0.891					0.903	0.878
Cars, PU, Vans	205	28	137	0	370	60	41	107	0	208	21	301	88	0	410	121	571	38	0	730	1718
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	rentwood Pkwy/Monarch Village Wa Northbound					rentwood Pkwy/Monarch Village Wa Southbound					Walt Stephens Rd Eastbound					Walt Stephens Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	16	5	10	0	31	21	2	19	0	42	24	176	24	0	224	3	108	29	0	140	437
5:00 PM	22	4	10	0	36	13	4	18	0	35	26	183	26	0	235	5	108	30	0	143	449
5:15 PM	19	3	11	0	33	26	3	12	0	41	17	189	20	0	226	9	121	20	0	150	450
5:30 PM	14	3	11	0	28	16	1	12	0	29	21	217	22	0	260	9	101	26	0	136	453
Total Volume	71	15	42	0	128	76	10	61	0	147	88	765	92	0	945	26	438	105	0	569	1789
% App. Total	55.5	11.7	32.8	0.0	100	51.7	6.8	41.5	0.0	100	9.3	81.0	9.7	0.0	100	4.6	77.0	18.5	0.0	100	
PHF					0.889					0.875					0.909					0.948	0.987
Cars, PU, Vans	71	15	42	0	128	76	10	61	0	147	88	765	92	0	945	26	438	105	0	569	1789
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-023
Location: Flippen Rd & Walt Stephens Rd/Red Oak Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Flippen Rd Northbound						Flippen Rd Southbound						Walt Stephens Rd/Red Oak Rd Eastbound						Walt Stephens Rd/Red Oak Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	60	43	5	0	0	108	0	51	23	0	0	74	33	15	50	0	0	98	4	26	2	0	0	32	312
7:15 AM	74	55	4	0	0	133	2	59	39	0	0	100	45	41	85	0	0	171	3	41	5	0	0	49	453
7:30 AM	70	83	2	0	0	155	4	49	41	0	0	94	36	29	120	0	0	185	4	38	7	0	0	49	483
7:45 AM	53	85	2	0	0	140	9	70	37	0	0	116	44	41	74	0	0	159	5	26	7	0	0	38	453
Total	257	266	13	0	0	536	15	229	140	0	0	384	158	126	329	0	0	613	16	131	21	0	0	168	1701
8:00 AM	51	60	5	0	0	116	2	45	24	0	0	71	41	18	57	0	0	116	4	35	2	0	0	41	344
8:15 AM	50	51	4	0	0	105	10	48	31	0	0	89	25	27	61	0	0	113	1	25	7	0	0	33	340
8:30 AM	59	57	3	0	0	119	1	54	26	0	0	81	35	23	49	0	0	107	1	28	3	0	0	32	339
8:45 AM	48	47	2	0	0	97	3	65	26	0	0	94	31	19	56	0	0	106	2	17	3	0	0	22	319
Total	208	215	14	0	0	437	16	212	107	0	0	335	132	87	223	0	0	442	8	105	15	0	0	128	1342
BREAK																									
4:00 PM	73	80	7	0	0	160	6	85	28	0	0	119	49	40	87	0	0	176	3	23	5	0	0	31	486
4:15 PM	64	93	8	0	0	165	6	102	46	0	0	154	36	45	77	0	0	158	7	29	5	0	0	41	518
4:30 PM	88	63	6	0	0	157	7	78	49	0	0	134	34	38	79	0	0	151	7	20	7	0	0	34	476
4:45 PM	83	73	7	0	0	163	5	96	47	0	0	148	47	37	107	0	0	191	4	38	5	0	0	47	549
Total	308	309	28	0	0	645	24	361	170	0	0	555	166	160	350	0	0	676	21	110	22	0	0	153	2029
5:00 PM	76	77	6	0	0	159	8	97	48	0	0	153	41	54	120	0	0	215	9	28	5	0	0	42	569
5:15 PM	82	64	8	0	0	154	10	131	51	0	0	192	41	66	114	0	0	221	7	38	2	0	0	47	614
5:30 PM	82	90	10	0	0	182	19	120	61	0	0	200	55	49	120	0	0	224	10	32	12	0	0	54	660
5:45 PM	94	82	5	0	0	181	7	108	48	0	0	163	46	61	106	0	0	213	9	30	8	0	0	47	604
Total	334	313	29	0	0	676	44	456	208	0	0	708	183	230	460	0	0	873	35	128	27	0	0	190	2447
Grand Total	1107	1103	84	0	0	2294	99	1258	625	0	0	1982	639	603	1362	0	0	2604	80	474	85	0	0	639	7519
Apprch %	48.3	48.1	3.7	0.0	0.0		5.0	63.5	31.5	0.0	0.0		24.5	23.2	52.3	0.0	0.0		12.5	74.2	13.3	0.0	0.0		
Total %	14.7	14.7	1.1	0.0	0.0	30.5	1.3	16.7	8.3	0.0	0.0	26.4	8.5	8.0	18.1	0.0	0.0	34.6	1.1	6.3	1.1	0.0	0.0	8.5	
Cars, PU, Vans	1107	1103	84	0	0	2294	99	1258	625		0	1982	639	603	1362	0		2604	80	474	85		0	639	7519
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-023
Location: Flippen Rd & Walt Stephens Rd/Red Oak Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Flippen Rd Northbound					Flippen Rd Southbound					Walt Stephens Rd/Red Oak Rd Eastbound					Walt Stephens Rd/Red Oak Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	74	55	4	0	133	2	59	39	0	100	45	41	85	0	171	3	41	5	0	49	453
7:30 AM	70	83	2	0	155	4	49	41	0	94	36	29	120	0	185	4	38	7	0	49	483
7:45 AM	53	85	2	0	140	9	70	37	0	116	44	41	74	0	159	5	26	7	0	38	453
8:00 AM	51	60	5	0	116	2	45	24	0	71	41	18	57	0	116	4	35	2	0	41	344
Total Volume	248	283	13	0	544	17	223	141	0	381	166	129	336	0	631	16	140	21	0	177	1733
% App. Total	45.6	52.0	2.4	0.0	100	4.5	58.5	37.0	0.0	100	26.3	20.4	53.2	0.0	100	9.0	79.1	11.9	0.0	100	
PHF					0.877					0.821					0.853					0.903	0.897
Cars, PU, Vans	248	283	13	0	544	17	223	141	0	381	166	129	336	0	631	16	140	21	0	177	1733
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Flippen Rd Northbound					Flippen Rd Southbound					Walt Stephens Rd/Red Oak Rd Eastbound					Walt Stephens Rd/Red Oak Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	76	77	6	0	159	8	97	48	0	153	41	54	120	0	215	9	28	5	0	42	569
5:15 PM	82	64	8	0	154	10	131	51	0	192	41	66	114	0	221	7	38	2	0	47	614
5:30 PM	82	90	10	0	182	19	120	61	0	200	55	49	120	0	224	10	32	12	0	54	660
5:45 PM	94	82	5	0	181	7	108	48	0	163	46	61	106	0	213	9	30	8	0	47	604
Total Volume	334	313	29	0	676	44	456	208	0	708	183	230	460	0	873	35	128	27	0	190	2447
% App. Total	49.4	46.3	4.3	0.0	100	6.2	64.4	29.4	0.0	100	21.0	26.3	52.7	0.0	100	18.4	67.4	14.2	0.0	100	
PHF					0.929					0.885					0.974					0.880	0.927
Cars, PU, Vans	334	313	29	0	676	44	456	208	0	708	183	230	460	0	873	35	128	27	0	190	2447
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-024
Location: Flippen Rd & Banks Rd/Village Ln
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Flippen Rd Northbound						Flippen Rd Southbound						Banks Rd/Village Ln Eastbound						Banks Rd/Village Ln Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	74	26	0	0	100	26	73	1	0	0	100	3	0	0	0	0	3	16	1	28	0	0	45	248
7:15 AM	0	96	22	0	0	118	41	116	0	0	0	157	9	0	2	0	0	11	26	1	29	0	0	56	342
7:30 AM	0	102	29	0	0	131	32	136	1	0	0	169	6	3	3	0	0	12	29	1	32	0	0	62	374
7:45 AM	1	96	45	0	0	142	45	97	2	0	0	144	1	0	2	0	0	3	24	0	30	0	0	54	343
Total	1	368	122	0	0	491	144	422	4	0	0	570	19	3	7	0	0	29	95	3	119	0	0	217	1307
8:00 AM	0	84	23	0	0	107	39	71	4	0	0	114	3	1	1	0	0	5	17	0	26	0	0	43	269
8:15 AM	1	79	37	0	0	117	38	72	0	0	1	110	2	1	2	0	0	5	18	0	20	0	0	38	270
8:30 AM	0	83	18	0	0	101	36	67	0	0	0	103	3	3	0	0	0	6	13	2	32	0	0	47	257
8:45 AM	0	68	25	0	0	93	51	80	0	0	0	131	1	1	0	0	0	2	17	1	23	0	0	41	267
Total	1	314	103	0	0	418	164	290	4	0	1	458	9	6	3	0	0	18	65	3	101	0	0	169	1063
BREAK																									
4:00 PM	4	104	32	0	0	140	40	111	2	0	0	153	4	3	2	0	0	9	34	0	50	0	0	84	386
4:15 PM	1	137	20	0	0	158	45	132	5	0	0	182	1	0	1	0	0	2	29	1	29	0	0	59	401
4:30 PM	2	121	36	0	0	159	56	110	2	0	0	168	1	2	1	0	0	4	38	0	51	0	0	89	420
4:45 PM	0	128	33	0	0	161	55	138	2	0	0	195	2	0	2	0	0	4	35	3	37	0	0	75	435
Total	7	490	121	0	0	618	196	491	11	0	0	698	8	5	6	0	0	19	136	4	167	0	0	307	1642
5:00 PM	2	109	40	0	0	151	47	173	2	0	0	222	2	0	0	0	0	2	27	0	46	0	0	73	448
5:15 PM	1	111	27	0	0	139	63	176	1	0	0	240	0	0	1	0	0	1	27	0	46	0	0	73	453
5:30 PM	0	134	33	0	0	167	62	175	4	0	0	241	2	0	1	0	0	3	32	1	43	0	0	76	487
5:45 PM	4	145	29	0	0	178	57	166	2	0	0	225	1	2	0	0	0	3	39	2	28	0	0	69	475
Total	7	499	129	0	0	635	229	690	9	0	0	928	5	2	2	0	0	9	125	3	163	0	0	291	1863
Grand Total	16	1671	475	0	0	2162	733	1893	28	0	1	2654	41	16	18	0	0	75	421	13	550	0	0	984	5875
Apprch %	0.7	77.3	22.0	0.0	0.0		27.6	71.3	1.1	0.0	0.0		54.7	21.3	24.0	0.0	0.0		42.8	1.3	55.9	0.0	0.0		
Total %	0.3	28.4	8.1	0.0	0.0	36.8	12.5	32.2	0.5	0.0	0.0	45.2	0.7	0.3	0.3	0.0	0.0	1.3	7.2	0.2	9.4	0.0	0.0	16.7	
Cars, PU, Vans	14	1631	461	0	0	2106	726	1854	27		1	2607	38	16	15	0		69	407	11	547		0	965	5747
% Cars, PU, Vans	87.5	97.6	97.1	0.0	0.0	97.4	99.0	97.9	96.4	0.0	100.0	98.2	92.7	100.0	83.3	0.0	0.0	92.0	96.7	84.6	99.5	0.0	0.0	98.1	97.8
Heavy Trucks	2	40	14	0		56	7	39	1	0		47	3	0	3	0		6	14	2	3	0		19	128
%Heavy Trucks	12.5	2.4	2.9	0.0	0.0	2.6	1.0	2.1	3.6	0.0	0.0	1.8	7.3	0.0	16.7	0.0	0.0	8.0	3.3	15.4	0.5	0.0	0.0	1.9	2.2

Project ID: 19-09344-024
Location: Flippen Rd & Banks Rd/Village Ln
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Flippen Rd Northbound					Flippen Rd Southbound					Banks Rd/Village Ln Eastbound					Banks Rd/Village Ln Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	96	22	0	118	41	116	0	0	157	9	0	2	0	11	26	1	29	0	56	342
7:30 AM	0	102	29	0	131	32	136	1	0	169	6	3	3	0	12	29	1	32	0	62	374
7:45 AM	1	96	45	0	142	45	97	2	0	144	1	0	2	0	3	24	0	30	0	54	343
8:00 AM	0	84	23	0	107	39	71	4	0	114	3	1	1	0	5	17	0	26	0	43	269
Total Volume	1	378	119	0	498	157	420	7	0	584	19	4	8	0	31	96	2	117	0	215	1328
% App. Total	0.2	75.9	23.9	0.0	100	26.9	71.9	1.2	0.0	100	61.3	12.9	25.8	0.0	100	44.7	0.9	54.4	0.0	100	
PHF					0.877					0.864					0.646					0.867	0.888
Cars, PU, Vans	1	373	115	0	489	157	410	7	0	574	18	4	7	0	29	93	0	116	0	209	1301
% Cars, PU, Vans	100.0	98.7	96.6	0.0	98.2	100.0	97.6	100.0	0.0	98.3	94.7	100.0	87.5	0.0	93.5	96.9	0.0	99.1	0.0	97.2	98.0
Heavy Trucks	0	5	4	0	9	0	10	0	0	10	1	0	1	0	2	3	2	1	0	6	27
%Heavy Trucks	0.0	1.3	3.4	0.0	1.8	0.0	2.4	0.0	0.0	1.7	5.3	0.0	12.5	0.0	6.5	3.1	100.0	0.9	0.0	2.8	2.0

PM

	Flippen Rd Northbound					Flippen Rd Southbound					Banks Rd/Village Ln Eastbound					Banks Rd/Village Ln Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	2	109	40	0	151	47	173	2	0	222	2	0	0	0	2	27	0	46	0	73	448
5:15 PM	1	111	27	0	139	63	176	1	0	240	0	0	1	0	1	27	0	46	0	73	453
5:30 PM	0	134	33	0	167	62	175	4	0	241	2	0	1	0	3	32	1	43	0	76	487
5:45 PM	4	145	29	0	178	57	166	2	0	225	1	2	0	0	3	39	2	28	0	69	475
Total Volume	7	499	129	0	635	229	690	9	0	928	5	2	2	0	9	125	3	163	0	291	1863
% App. Total	1.1	78.6	20.3	0.0	100	24.7	74.4	1.0	0.0	100	55.6	22.2	22.2	0.0	100	43.0	1.0	56.0	0.0	100	
PHF					0.892					0.963					0.750					0.957	0.956
Cars, PU, Vans	7	493	129	0	629	229	678	9	0	916	5	2	2	0	9	125	3	163	0	291	1845
% Cars, PU, Vans	100.0	98.8	100.0	0.0	99.1	100.0	98.3	100.0	0.0	98.7	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	99.0
Heavy Trucks	0	6	0	0	6	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	18
%Heavy Trucks	0.0	1.2	0.0	0.0	0.9	0.0	1.7	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0

Project ID: 19-09344-025
Location: Tye St & Banks Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Tye St Northbound						Tye St Southbound						Banks Rd Eastbound						Banks Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	9	0	5	0	0	14	3	55	0	0	0	58	0	45	5	0	0	50	122
7:15 AM	0	0	0	0	0	0	7	0	4	0	0	11	7	56	0	0	0	63	0	50	6	0	0	56	130
7:30 AM	0	0	0	0	0	0	21	0	8	0	0	29	6	69	0	0	0	75	0	46	18	0	0	64	168
7:45 AM	0	0	0	0	0	0	11	0	5	0	0	16	4	87	0	0	0	91	0	42	6	0	0	48	155
Total	0	0	0	0	0	0	48	0	22	0	0	70	20	267	0	0	0	287	0	183	35	0	0	218	575
8:00 AM	0	0	0	0	0	0	4	0	4	0	0	8	4	60	0	0	0	64	0	40	7	0	0	47	119
8:15 AM	0	0	0	0	0	0	3	0	4	0	0	7	7	71	0	0	0	78	0	33	3	0	0	36	121
8:30 AM	0	0	0	0	0	0	6	0	2	0	0	8	5	57	0	0	0	62	0	44	14	0	0	58	128
8:45 AM	0	0	0	0	0	0	11	0	3	0	0	14	3	76	0	0	0	79	0	35	11	0	0	46	139
Total	0	0	0	0	0	0	24	0	13	0	0	37	19	264	0	0	0	283	0	152	35	0	0	187	507
BREAK																									
4:00 PM	0	0	0	0	0	0	6	0	9	0	0	15	8	72	0	0	0	80	0	79	11	0	0	90	185
4:15 PM	0	0	0	0	0	0	13	0	11	0	0	24	6	61	0	0	0	67	0	56	8	0	0	64	155
4:30 PM	0	0	0	0	0	0	12	0	11	0	0	23	10	79	0	0	0	89	0	76	10	0	0	86	198
4:45 PM	0	0	0	0	0	0	12	0	12	0	0	24	10	83	0	0	0	93	0	49	11	0	0	60	177
Total	0	0	0	0	0	0	43	0	43	0	0	86	34	295	0	0	0	329	0	260	40	0	0	300	715
5:00 PM	0	0	0	0	0	0	11	0	4	0	0	15	8	73	0	0	0	81	0	72	4	0	0	76	172
5:15 PM	0	0	0	0	0	0	11	0	11	0	0	22	6	90	0	0	0	96	0	62	11	0	0	73	191
5:30 PM	0	0	0	0	0	0	11	0	11	1	0	23	8	84	0	0	0	92	0	63	17	0	0	80	195
5:45 PM	0	0	0	0	0	0	11	0	13	0	0	24	13	77	0	1	0	91	0	53	7	0	0	60	175
Total	0	0	0	0	0	0	44	0	39	1	0	84	35	324	0	1	0	360	0	250	39	0	0	289	733
Grand Total	0	0	0	0	0	0	159	0	117	1	0	277	108	1150	0	1	0	1259	0	845	149	0	0	994	2530
Apprch %	0.0	0.0	0.0	0.0	0.0		57.4	0.0	42.2	0.4	0.0		8.6	91.3	0.0	0.1	0.0		0.0	85.0	15.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	4.6	0.0	0.0	10.9	4.3	45.5	0.0	0.0	0.0	49.8	0.0	33.4	5.9	0.0	0.0	39.3	
Cars, PU, Vans	0	0	0	0	0	0	159	0	117		0	277	108	1150	0	1		1259	0	845	149		0	994	2530
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-025
Location: Tye St & Banks Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Tye St Northbound					Tye St Southbound					Banks Rd Eastbound					Banks Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	0	0	0	0	0	9	0	5	0	14	3	55	0	0	58	0	45	5	0	50	122
7:15 AM	0	0	0	0	0	7	0	4	0	11	7	56	0	0	63	0	50	6	0	56	130
7:30 AM	0	0	0	0	0	21	0	8	0	29	6	69	0	0	75	0	46	18	0	64	168
7:45 AM	0	0	0	0	0	11	0	5	0	16	4	87	0	0	91	0	42	6	0	48	155
Total Volume	0	0	0	0	0	48	0	22	0	70	20	267	0	0	287	0	183	35	0	218	575
% App. Total	0.0	0.0	0.0	0.0	0	68.6	0.0	31.4	0.0	100	7.0	93.0	0.0	0.0	100	0.0	83.9	16.1	0.0	100	
PHF										0.603					0.788					0.852	0.856
Cars, PU, Vans	0	0	0	0	0	48	0	22	0	70	20	267	0	0	287	0	183	35	0	218	575
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

PM

	Tye St Northbound					Tye St Southbound					Banks Rd Eastbound					Banks Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	0	0	0	0	0	12	0	11	0	23	10	79	0	0	89	0	76	10	0	86	198
4:45 PM	0	0	0	0	0	12	0	12	0	24	10	83	0	0	93	0	49	11	0	60	177
5:00 PM	0	0	0	0	0	11	0	4	0	15	8	73	0	0	81	0	72	4	0	76	172
5:15 PM	0	0	0	0	0	11	0	11	0	22	6	90	0	0	96	0	62	11	0	73	191
Total Volume	0	0	0	0	0	46	0	38	0	84	34	325	0	0	359	0	259	36	0	295	738
% App. Total	0.0	0.0	0.0	0.0	0	54.8	0.0	45.2	0.0	100	9.5	90.5	0.0	0.0	100	0.0	87.8	12.2	0.0	100	
PHF										0.875					0.935					0.858	0.932
Cars, PU, Vans	0	0	0	0	0	46	0	38	0	84	34	325	0	0	359	0	259	36	0	295	738
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-026
Location: Rock Quarry Rd & Banks Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Rock Quarry Rd Northbound						Rock Quarry Rd Southbound						Banks Rd Eastbound						Banks Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	35	73	1	0	0	109	1	63	11	0	0	75	18	1	49	0	0	68	12	5	4	0	0	21	273
7:15 AM	35	89	4	0	0	128	0	115	17	0	0	132	17	1	53	0	0	71	20	7	2	0	0	29	360
7:30 AM	33	87	4	0	0	124	0	164	12	0	0	176	20	4	69	0	0	93	10	10	6	0	0	26	419
7:45 AM	27	81	4	0	2	112	1	156	14	0	0	171	29	3	62	0	0	94	10	1	1	0	0	12	389
Total	130	330	13	0	2	473	2	498	54	0	0	554	84	9	233	0	0	326	52	23	13	0	0	88	1441
8:00 AM	29	106	6	0	0	141	2	111	13	0	0	126	19	3	43	0	0	65	17	5	2	0	0	24	356
8:15 AM	23	82	3	0	0	108	0	137	10	0	0	147	25	2	51	0	0	78	6	5	2	0	0	13	346
8:30 AM	35	91	2	0	0	128	0	132	12	0	0	144	18	4	59	0	0	81	6	3	2	0	0	11	364
8:45 AM	35	96	5	0	0	136	1	106	12	0	0	119	18	3	64	0	0	85	2	2	2	0	0	6	346
Total	122	375	16	0	0	513	3	486	47	0	0	536	80	12	217	0	0	309	31	15	8	0	0	54	1412
BREAK																									
4:00 PM	65	145	7	0	2	217	1	102	28	0	0	131	13	4	56	0	0	73	4	1	1	0	0	6	427
4:15 PM	51	119	8	0	0	178	2	115	15	0	0	132	15	4	56	0	0	75	2	2	1	0	0	5	390
4:30 PM	58	126	9	0	0	193	2	132	10	0	0	144	19	7	68	0	0	94	5	3	1	0	0	9	440
4:45 PM	46	110	9	0	0	165	2	117	15	0	3	134	24	4	71	0	0	99	7	0	0	0	0	7	405
Total	220	500	33	0	2	753	7	466	68	0	3	541	71	19	251	0	0	341	18	6	3	0	0	27	1662
5:00 PM	53	148	4	0	5	205	3	166	15	0	0	184	17	2	53	0	0	72	6	3	1	0	0	10	471
5:15 PM	62	147	6	0	0	215	4	130	20	0	0	154	20	10	68	0	0	98	6	2	2	0	0	10	477
5:30 PM	57	130	10	0	2	197	3	127	19	0	0	149	14	10	71	0	0	95	7	3	3	0	0	13	454
5:45 PM	38	105	12	0	1	155	4	151	21	0	0	176	14	3	68	0	0	85	5	7	2	0	0	14	430
Total	210	530	32	0	8	772	14	574	75	0	0	663	65	25	260	0	0	350	24	15	8	0	0	47	1832
Grand Total	682	1735	94	0	12	2511	26	2024	244	0	3	2294	300	65	961	0	0	1326	125	59	32	0	0	216	6347
Apprch %	27.2	69.1	3.7	0.0	0.5		1.1	88.2	10.6	0.0	0.1		22.6	4.9	72.5	0.0	0.0		57.9	27.3	14.8	0.0	0.0		
Total %	10.7	27.3	1.5	0.0	0.2	39.6	0.4	31.9	3.8	0.0	0.0	36.1	4.7	1.0	15.1	0.0	0.0	20.9	2.0	0.9	0.5	0.0	0.0	3.4	
Cars, PU, Vans	675	1654	90	0	12	2419	26	1941	234		3	2201	284	65	948	0		1297	123	57	32		0	212	6129
% Cars, PU, Vans	99.0	95.3	95.7	0.0	100.0	96.3	100.0	95.9	95.9	0.0	100.0	95.9	94.7	100.0	98.6	0.0	0.0	97.8	98.4	96.6	100.0	0.0	0.0	98.1	96.6
Heavy Trucks	7	81	4	0		92	0	83	10	0		93	16	0	13	0		29	2	2	0	0		4	218
%Heavy Trucks	1.0	4.7	4.3	0.0	0.0	3.7	0.0	4.1	4.1	0.0	0.0	4.1	5.3	0.0	1.4	0.0	0.0	2.2	1.6	3.4	0.0	0.0	0.0	1.9	3.4

Project ID: 19-09344-026
Location: Rock Quarry Rd & Banks Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Rock Quarry Rd Northbound					Rock Quarry Rd Southbound					Banks Rd Eastbound					Banks Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	35	89	4	0	128	0	115	17	0	132	17	1	53	0	71	20	7	2	0	29	360
7:30 AM	33	87	4	0	124	0	164	12	0	176	20	4	69	0	93	10	10	6	0	26	419
7:45 AM	27	81	4	0	112	1	156	14	0	171	29	3	62	0	94	10	1	1	0	12	389
8:00 AM	29	106	6	0	141	2	111	13	0	126	19	3	43	0	65	17	5	2	0	24	356
Total Volume	124	363	18	0	505	3	546	56	0	605	85	11	227	0	323	57	23	11	0	91	1524
% App. Total	24.6	71.9	3.6	0.0	100	0.5	90.2	9.3	0.0	100	26.3	3.4	70.3	0.0	100	62.6	25.3	12.1	0.0	100	
PHF					0.895					0.859					0.859					0.784	0.909
Cars, PU, Vans	121	346	16	0	483	3	520	54	0	577	83	11	225	0	319	56	23	11	0	90	1469
% Cars, PU, Vans	97.6	95.3	88.9	0.0	95.6	100.0	95.2	96.4	0.0	95.4	97.6	100.0	99.1	0.0	98.8	98.2	100.0	100.0	0.0	98.9	96.4
Heavy Trucks	3	17	2	0	22	0	26	2	0	28	2	0	2	0	4	1	0	0	0	1	55
%Heavy Trucks	2.4	4.7	11.1	0.0	4.4	0.0	4.8	3.6	0.0	4.6	2.4	0.0	0.9	0.0	1.2	1.8	0.0	0.0	0.0	1.1	3.6

PM

	Rock Quarry Rd Northbound					Rock Quarry Rd Southbound					Banks Rd Eastbound					Banks Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	53	148	4	0	205	3	166	15	0	184	17	2	53	0	72	6	3	1	0	10	471
5:15 PM	62	147	6	0	215	4	130	20	0	154	20	10	68	0	98	6	2	2	0	10	477
5:30 PM	57	130	10	0	197	3	127	19	0	149	14	10	71	0	95	7	3	3	0	13	454
5:45 PM	38	105	12	0	155	4	151	21	0	176	14	3	68	0	85	5	7	2	0	14	430
Total Volume	210	530	32	0	772	14	574	75	0	663	65	25	260	0	350	24	15	8	0	47	1832
% App. Total	27.2	68.7	4.1	0.0	100	2.1	86.6	11.3	0.0	100	18.6	7.1	74.3	0.0	100	51.1	31.9	17.0	0.0	100	
PHF					0.898					0.901					0.893					0.839	0.960
Cars, PU, Vans	209	522	31	0	762	14	569	75	0	658	64	25	260	0	349	24	15	8	0	47	1816
% Cars, PU, Vans	99.5	98.5	96.9	0.0	98.7	100.0	99.1	100.0	0.0	99.2	98.5	100.0	100.0	0.0	99.7	100.0	100.0	100.0	0.0	100.0	99.1
Heavy Trucks	1	8	1	0	10	0	5	0	0	5	1	0	0	0	1	0	0	0	0	0	16
%Heavy Trucks	0.5	1.5	3.1	0.0	1.3	0.0	0.9	0.0	0.0	0.8	1.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.9

Project ID: 19-09344-027
Location: Rock Quarry Rd & Red Oak Rd/Dwy **Day: Thursday**
City: Stockbridge **Date: 05/09/2019**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Rock Quarry Rd Northbound						Rock Quarry Rd Southbound						Red Oak Rd/Dwy Eastbound						Red Oak Rd/Dwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	14	87	0	0	0	101	0	72	16	0	0	88	6	0	2	0	0	8	0	1	0	0	0	1	198
7:15 AM	7	95	0	0	0	102	0	137	19	0	0	156	23	0	9	0	0	32	0	0	0	0	0	0	290
7:30 AM	8	105	0	0	0	113	0	158	23	0	0	181	26	0	11	0	0	37	1	0	0	0	0	1	332
7:45 AM	5	103	2	0	0	110	0	160	17	0	0	177	27	0	5	0	0	32	1	0	1	0	0	2	321
Total	34	390	2	0	0	426	0	527	75	0	0	602	82	0	27	0	0	109	2	1	1	0	0	4	1141
8:00 AM	10	106	0	0	0	116	1	128	22	0	0	151	8	1	5	0	0	14	0	1	0	0	0	1	282
8:15 AM	10	94	0	0	0	104	0	158	15	0	0	173	20	1	6	0	0	27	1	0	0	0	0	1	305
8:30 AM	15	84	1	0	0	100	1	127	15	0	0	143	12	1	5	0	0	18	2	0	1	0	0	3	264
8:45 AM	12	97	1	0	0	110	2	121	14	0	0	137	10	0	7	0	0	17	0	0	1	0	0	1	265
Total	47	381	2	0	0	430	4	534	66	0	0	604	50	3	23	0	0	76	3	1	2	0	0	6	1116
BREAK																									
4:00 PM	15	137	3	0	0	155	1	113	13	0	0	127	33	0	12	0	0	45	1	0	1	0	0	2	329
4:15 PM	8	124	0	0	0	132	0	112	13	0	0	125	35	0	14	0	0	49	2	1	1	0	0	4	310
4:30 PM	17	134	1	0	0	152	1	126	20	0	0	147	22	0	13	0	0	35	1	0	0	0	0	1	335
4:45 PM	15	119	0	0	0	134	0	126	12	0	0	138	29	1	9	0	0	39	1	0	0	0	0	1	312
Total	55	514	4	0	0	573	2	477	58	0	0	537	119	1	48	0	0	168	5	1	2	0	0	8	1286
5:00 PM	15	149	1	0	0	165	1	158	13	0	0	172	25	0	18	0	0	43	2	0	2	0	0	4	384
5:15 PM	11	158	0	0	0	169	1	129	25	0	0	155	32	0	26	0	0	58	0	0	0	0	0	0	382
5:30 PM	11	132	2	0	0	145	0	132	21	0	0	153	25	0	13	0	0	38	2	0	0	0	0	2	338
5:45 PM	14	113	1	0	0	128	0	152	22	0	0	174	26	1	24	0	0	51	1	0	0	0	0	1	354
Total	51	552	4	0	0	607	2	571	81	0	0	654	108	1	81	0	0	190	5	0	2	0	0	7	1458
Grand Total	187	1837	12	0	0	2036	8	2109	280	0	0	2397	359	5	179	0	0	543	15	3	7	0	0	25	5001
Apprch %	9.2	90.2	0.6	0.0	0.0		0.3	88.0	11.7	0.0	0.0		66.1	0.9	33.0	0.0	0.0		60.0	12.0	28.0	0.0	0.0		
Total %	3.7	36.7	0.2	0.0	0.0	40.7	0.2	42.2	5.6	0.0	0.0	47.9	7.2	0.1	3.6	0.0	0.0	10.9	0.3	0.1	0.1	0.0	0.0	0.5	
Cars, PU, Vans	187	1837	12	0	0	2036	8	2109	280		0	2397	359	5	179	0		543	15	3	7		0	25	5001
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-027
Location: Rock Quarry Rd & Red Oak Rd/Dwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Rock Quarry Rd Northbound					Rock Quarry Rd Southbound					Red Oak Rd/Dwy Eastbound					Red Oak Rd/Dwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	8	105	0	0	113	0	158	23	0	181	26	0	11	0	37	1	0	0	0	1	332
7:45 AM	5	103	2	0	110	0	160	17	0	177	27	0	5	0	32	1	0	1	0	2	321
8:00 AM	10	106	0	0	116	1	128	22	0	151	8	1	5	0	14	0	1	0	0	1	282
8:15 AM	10	94	0	0	104	0	158	15	0	173	20	1	6	0	27	1	0	0	0	1	305
Total Volume	33	408	2	0	443	1	604	77	0	682	81	2	27	0	110	3	1	1	0	5	1240
% App. Total	7.4	92.1	0.5	0.0	100	0.1	88.6	11.3	0.0	100	73.6	1.8	24.5	0.0	100	60.0	20.0	20.0	0.0	100	
PHF					0.955					0.942					0.743					0.625	0.934
Cars, PU, Vans	33	408	2	0	443	1	604	77	0	682	81	2	27	0	110	3	1	1	0	5	1240
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Rock Quarry Rd Northbound					Rock Quarry Rd Southbound					Red Oak Rd/Dwy Eastbound					Red Oak Rd/Dwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	15	149	1	0	165	1	158	13	0	172	25	0	18	0	43	2	0	2	0	4	384
5:15 PM	11	158	0	0	169	1	129	25	0	155	32	0	26	0	58	0	0	0	0	0	382
5:30 PM	11	132	2	0	145	0	132	21	0	153	25	0	13	0	38	2	0	0	0	2	338
5:45 PM	14	113	1	0	128	0	152	22	0	174	26	1	24	0	51	1	0	0	0	1	354
Total Volume	51	552	4	0	607	2	571	81	0	654	108	1	81	0	190	5	0	2	0	7	1458
% App. Total	8.4	90.9	0.7	0.0	100	0.3	87.3	12.4	0.0	100	56.8	0.5	42.6	0.0	100	71.4	0.0	28.6	0.0	100	
PHF					0.898					0.940					0.819					0.438	0.949
Cars, PU, Vans	51	552	4	0	607	2	571	81	0	654	108	1	81	0	190	5	0	2	0	7	1458
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-028
Location: Tye St & Red Oak Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Tye St Northbound						Tye St Southbound						Red Oak Rd Eastbound						Red Oak Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	6	0	0	0	6	2	8	7	0	0	17	15	8	0	0	0	23	1	26	4	0	0	31	77
7:15 AM	0	16	3	0	0	19	2	10	21	0	0	33	10	30	1	0	0	41	0	26	0	0	0	26	119
7:30 AM	1	18	2	0	0	21	1	27	25	0	0	53	11	32	2	0	0	45	1	28	2	0	0	31	150
7:45 AM	1	12	1	0	0	14	1	15	18	0	0	34	20	31	0	0	0	51	1	21	0	0	1	22	121
Total	2	52	6	0	0	60	6	60	71	0	0	137	56	101	3	0	0	160	3	101	6	0	1	110	467
8:00 AM	3	8	1	0	0	12	0	7	10	0	0	17	9	14	2	0	0	25	2	24	1	0	0	27	81
8:15 AM	2	11	2	0	0	15	0	8	16	0	0	24	12	27	0	0	0	39	0	16	2	0	1	18	96
8:30 AM	0	13	2	0	0	15	1	7	13	0	0	21	8	18	5	0	0	31	1	19	2	0	0	22	89
8:45 AM	2	13	0	0	0	15	1	9	6	0	0	16	5	18	0	0	0	23	1	18	1	0	0	20	74
Total	7	45	5	0	0	57	2	31	45	0	0	78	34	77	7	0	0	118	4	77	6	0	1	87	340
BREAK																									
4:00 PM	1	17	1	0	0	19	1	11	8	0	0	20	12	35	3	0	0	50	2	21	3	0	0	26	115
4:15 PM	4	10	1	0	0	15	2	18	15	0	0	35	22	37	3	0	0	62	3	21	1	0	1	25	137
4:30 PM	2	18	0	0	0	20	0	24	16	0	0	40	21	31	0	0	0	52	1	28	4	0	0	33	145
4:45 PM	3	18	1	0	0	22	3	23	12	0	0	38	15	36	2	0	0	53	0	24	2	0	0	26	139
Total	10	63	3	0	0	76	6	76	51	0	0	133	70	139	8	0	0	217	6	94	10	0	1	110	536
5:00 PM	0	12	1	0	0	13	0	16	17	0	0	33	24	34	4	0	0	62	1	25	4	0	0	30	138
5:15 PM	4	7	0	0	0	11	1	17	15	0	0	33	33	50	3	0	0	86	0	29	5	0	0	34	164
5:30 PM	3	14	3	0	0	20	0	13	19	0	0	32	31	38	6	0	0	75	0	26	3	0	0	29	156
5:45 PM	1	15	5	0	0	21	9	18	16	0	0	43	23	45	3	0	0	71	4	31	7	0	0	42	177
Total	8	48	9	0	0	65	10	64	67	0	0	141	111	167	16	0	0	294	5	111	19	0	0	135	635
Grand Total	27	208	23	0	0	258	24	231	234	0	0	489	271	484	34	0	0	789	18	383	41	0	3	442	1978
Apprch %	10.5	80.6	8.9	0.0	0.0		4.9	47.2	47.9	0.0	0.0		34.3	61.3	4.3	0.0	0.0		4.1	86.7	9.3	0.0	0.7		
Total %	1.4	10.5	1.2	0.0	0.0	13.0	1.2	11.7	11.8	0.0	0.0	24.7	13.7	24.5	1.7	0.0	0.0	39.9	0.9	19.4	2.1	0.0	0.2	22.3	
Cars, PU, Vans	27	206	21	0	0	254	24	226	231		0	481	265	466	34	0		765	18	368	39		3	425	1925
% Cars, PU, Vans	100.0	99.0	91.3	0.0	0.0	98.4	100.0	97.8	98.7	0.0	0.0	98.4	97.8	96.3	100.0	0.0	0.0	97.0	100.0	96.1	95.1	0.0	100.0	96.2	97.3
Heavy Trucks	0	2	2	0		4	0	5	3	0		8	6	18	0	0		24	0	15	2	0		17	53
%Heavy Trucks	0.0	1.0	8.7	0.0	0.0	1.6	0.0	2.2	1.3	0.0	0.0	1.6	2.2	3.7	0.0	0.0	0.0	3.0	0.0	3.9	4.9	0.0	0.0	3.8	2.7

Project ID: 19-09344-028
Location: Tye St & Red Oak Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Tye St Northbound					Tye St Southbound					Red Oak Rd Eastbound					Red Oak Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	16	3	0	19	2	10	21	0	33	10	30	1	0	41	0	26	0	0	26	119
7:30 AM	1	18	2	0	21	1	27	25	0	53	11	32	2	0	45	1	28	2	0	31	150
7:45 AM	1	12	1	0	14	1	15	18	0	34	20	31	0	0	51	1	21	0	0	22	121
8:00 AM	3	8	1	0	12	0	7	10	0	17	9	14	2	0	25	2	24	1	0	27	81
Total Volume	5	54	7	0	66	4	59	74	0	137	50	107	5	0	162	4	99	3	0	106	471
% App. Total	7.6	81.8	10.6	0.0	100	2.9	43.1	54.0	0.0	100	30.9	66.0	3.1	0.0	100	3.8	93.4	2.8	0.0	100	
PHF					0.786					0.646					0.794					0.855	0.785
Cars, PU, Vans	5	53	6	0	64	4	58	74	0	136	48	105	5	0	158	4	91	3	0	98	456
% Cars, PU, Vans	100.0	98.1	85.7	0.0	97.0	100.0	98.3	100.0	0.0	99.3	96.0	98.1	100.0	0.0	97.5	100.0	91.9	100.0	0.0	92.5	96.8
Heavy Trucks	0	1	1	0	2	0	1	0	0	1	2	2	0	0	4	0	8	0	0	8	15
%Heavy Trucks	0.0	1.9	14.3	0.0	3.0	0.0	1.7	0.0	0.0	0.7	4.0	1.9	0.0	0.0	2.5	0.0	8.1	0.0	0.0	7.5	3.2

PM

	Tye St Northbound					Tye St Southbound					Red Oak Rd Eastbound					Red Oak Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	12	1	0	13	0	16	17	0	33	24	34	4	0	62	1	25	4	0	30	138
5:15 PM	4	7	0	0	11	1	17	15	0	33	33	50	3	0	86	0	29	5	0	34	164
5:30 PM	3	14	3	0	20	0	13	19	0	32	31	38	6	0	75	0	26	3	0	29	156
5:45 PM	1	15	5	0	21	9	18	16	0	43	23	45	3	0	71	4	31	7	0	42	177
Total Volume	8	48	9	0	65	10	64	67	0	141	111	167	16	0	294	5	111	19	0	135	635
% App. Total	12.3	73.8	13.8	0.0	100	7.1	45.4	47.5	0.0	100	37.8	56.8	5.4	0.0	100	3.7	82.2	14.1	0.0	100	
PHF					0.774					0.820					0.855					0.804	0.897
Cars, PU, Vans	8	48	9	0	65	10	64	67	0	141	110	159	16	0	285	5	110	18	0	133	624
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	99.1	95.2	100.0	0.0	96.9	100.0	99.1	94.7	0.0	98.5	98.3
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	1	8	0	0	9	0	1	1	0	2	11
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.8	0.0	0.0	3.1	0.0	0.9	5.3	0.0	1.5	1.7

Project ID: 19-09344-029
Location: Walter Way & Davidson Pkwy
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Walter Way Northbound						Walter Way Southbound						Davidson Pkwy Eastbound						Davidson Pkwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	12	1	1	0	0	14	1	1	0	0	0	2	0	8	7	0	0	15	0	26	1	0	0	27	58
6:15 AM	9	1	1	0	0	11	1	0	0	0	0	1	0	13	5	0	0	18	0	35	1	0	0	36	66
6:30 AM	6	2	2	0	0	10	0	0	0	0	0	0	0	16	5	0	0	21	2	25	3	0	0	30	61
6:45 AM	16	1	3	0	0	20	4	0	0	0	0	4	0	13	9	0	0	22	0	34	3	0	0	37	83
Total	43	5	7	0	0	55	6	1	0	0	0	7	0	50	26	0	0	76	2	120	8	0	0	130	268
7:00 AM	18	1	3	0	0	22	1	1	0	0	0	2	0	9	8	0	0	17	0	33	1	0	0	34	75
7:15 AM	14	2	4	0	0	20	3	0	0	0	0	3	0	23	12	0	0	35	2	40	8	0	0	50	108
7:30 AM	19	1	9	0	0	29	3	3	1	0	0	7	1	26	11	0	0	38	1	45	5	0	0	51	125
7:45 AM	10	3	2	0	0	15	2	1	0	0	0	3	1	26	10	0	0	37	6	46	16	0	0	68	123
Total	61	7	18	0	0	86	9	5	1	0	0	15	2	84	41	0	0	127	9	164	30	0	0	203	431
8:00 AM	9	0	0	0	0	9	5	0	0	0	0	5	1	21	7	0	0	29	2	46	15	0	0	63	106
8:15 AM	13	3	1	0	0	17	2	3	1	0	0	6	1	32	8	0	0	41	1	42	7	0	0	50	114
8:30 AM	11	3	3	0	0	17	5	2	0	0	0	7	0	26	7	0	0	33	4	44	11	0	0	59	116
8:45 AM	15	1	1	0	0	17	7	1	1	0	0	9	1	30	7	0	0	38	1	35	18	0	0	54	118
Total	48	7	5	0	0	60	19	6	2	0	0	27	3	109	29	0	0	141	8	167	51	0	0	226	454
9:00 AM	7	0	3	0	0	10	10	1	1	0	0	12	0	28	10	0	0	38	2	26	13	0	0	41	101
9:15 AM	16	1	3	0	0	20	8	1	0	0	0	9	1	18	10	0	0	29	0	35	16	0	0	51	109
9:30 AM	9	1	1	0	0	11	7	4	1	0	0	12	0	27	12	0	0	39	0	30	12	0	0	42	104
9:45 AM	12	3	2	0	0	17	8	1	3	0	0	12	1	23	5	0	0	29	3	25	14	0	0	42	100
Total	44	5	9	0	0	58	33	7	5	0	0	45	2	96	37	0	0	135	5	116	55	0	0	176	414
10:00 AM	10	1	1	0	0	12	7	3	0	0	0	10	0	23	8	0	0	31	7	32	11	0	0	50	103
10:15 AM	11	3	1	0	0	15	9	1	2	0	0	12	1	33	6	0	0	40	3	27	7	0	0	37	104
10:30 AM	11	0	2	0	0	13	9	3	2	0	0	14	0	23	3	0	0	26	1	35	16	0	0	52	105
10:45 AM	11	1	3	0	0	15	13	3	1	0	0	17	0	19	7	0	0	26	5	22	13	0	0	40	98
Total	43	5	7	0	0	55	38	10	5	0	0	53	1	98	24	0	0	123	16	116	47	0	0	179	410
11:00 AM	21	8	5	0	0	34	13	4	2	0	0	19	0	30	8	0	0	38	0	24	19	0	0	43	134
11:15 AM	5	3	2	0	0	10	24	3	1	0	0	28	1	35	19	0	0	55	6	17	12	0	0	35	128
11:30 AM	5	4	1	0	0	10	13	5	0	0	0	18	3	26	3	0	0	32	7	36	15	0	0	58	118
11:45 AM	6	2	3	0	0	11	20	1	2	0	0	23	1	41	6	0	0	48	1	35	14	0	0	50	132
Total	37	17	11	0	0	65	70	13	5	0	0	88	5	132	36	0	0	173	14	112	60	0	0	186	512
12:00 PM	8	0	2	0	0	10	12	0	0	0	0	12	0	30	9	0	0	39	1	36	15	0	0	52	113
12:15 PM	17	0	2	0	0	19	18	3	2	0	0	23	1	18	9	0	0	28	1	24	14	0	0	39	109
12:30 PM	7	1	2	0	0	10	15	0	4	0	0	19	1	22	11	0	0	34	0	30	15	0	0	45	108
12:45 PM	7	3	4	0	0	14	19	1	5	0	0	25	2	34	11	0	0	47	5	28	16	0	0	49	135
Total	39	4	10	0	0	53	64	4	11	0	0	79	4	104	40	0	0	148	7	118	60	0	0	185	465
1:00 PM	14	4	1	0	0	19	14	1	0	0	0	15	0	32	7	0	0	39	2	34	22	0	0	58	131
1:15 PM	5	2	6	0	0	13	20	4	2	0	0	26	3	37	8	0	0	48	2	36	19	0	0	57	144
1:30 PM	14	1	5	0	0	20	15	2	3	0	0	20	0	26	11	0	0	37	2	43	13	0	0	58	135
1:45 PM	15	2	3	0	0	20	10	1	2	0	0	13	2	37	10	0	0	49	2	38	20	0	0	60	142
Total	48	9	15	0	0	72	59	8	7	0	0	74	5	132	36	0	0	173	8	151	74	0	0	233	552
2:00 PM	12	2	1	0	0	15	11	4	2	0	0	17	1	31	12	0	0	44	5	38	32	0	0	75	151
2:15 PM	7	3	1	0	0	11	15	1	4	0	0	20	1	38	10	0	0	49	0	30	17	0	0	47	127
2:30 PM	52	8	15	0	0	75	15	2	1	0	0	18	2	37	4	0	0	43	3	30	18	0	0	51	187
2:45 PM	16	5	3	0	0	24	19	1	2	0	0	22	0	35	8	0	0	43	2	22	22	0	0	46	135
Total	87	18	20	0	0	125	60	8	9	0	0	77	4	141	34	0	0	179	10	120	89	0	0	219	600
3:00 PM	14	7	3	0	0	24	20	2	4	0	0	26	1	46	6	0	0	53	2	36	11	0	0	49	152
3:15 PM	12	5	0	0	0	17	22	1	2	0	0	25	2	34	11	0	0	47	2	32	20	0	0	54	143
3:30 PM	11	2	5	0	0	18	14	3	1	1	0	19	4	44	15	0	0	63	3	36	19	0	0	58	158
3:45 PM	7	0	4	0	0	11	19	0	2	0	0	21	4	38	12	0	0	54	6	31	23	0	0	60	146
Total	44	14	12	0	0	70	75	6	9	1	0	91	11	162	44	0	0	217	13	135	73	0	0	221	599
4:00 PM	6	3	8	0	0	17	10	1	2	0	0	13	1	48	17	0	0	66	5	39	34	0	0	78	174
4:15 PM	5	3	1	0	0	9	20	4	6	0	0	30	1	56	10	0	0	67	5	36	24	0	0	65	171
4:30 PM	6	0	2	0	0	8	27	4	3	0	0	34	1	56	11	0	0	68	0	41	23	0	0	64	174
4:45 PM	11	3	3	0	0	17	16	0	2	0	0	18	0	48	16	0	0	64	7	42	14	0	0	63	162
Total	28	9	14	0	0	51	73	9	13	0	0	95	3	208	54	0	0	265	17	158	95	0	0	270	681
5:00 PM	5	2	4	0	0	11	28	1	0	0	0	29	0	68	11	0	0	79	3	44	18	0	0	65	184
5:15 PM	11	1	2	0	0	14	14	3	0	0	0	17	0	70	13	0	0	83	2	42	14	0	0	58	172
5:30 PM	5	0	5	0	0	10	13	3	3	0	0	19	0	66	8	0	0	74	3	38	20	0	0	61	164
5:45 PM	8	1	5	0	0	14	12	1	0	0	0	13	1	64	8	0	0	73	2	57	15	0	0	74	174
Total	29	4	16	0	0	49	67	8	3	0	0	78	1	268	40	0	0	309	10	181	67	0	0	258	694
6:00 PM	9	0	2	0	0	11	13	0	1	0	0	14	0	57	9	0	0	66	0	53	10	0	0	63	154
6:15 PM	10	2	0	0	0	12	12	1	1	0	0	14	0	57	12	0	0	69	6	45	7	0	0	58	153
6:30 PM	7	0	0	0	0	7	9	3	3	0	0	15	0	37	5	0	0	42	3	27	11	0	0	41	105
6:45 PM	5	2	2	0	0	9	10	1	1	0	0	12	1	36	8	0	0	45	3	29	4	0	0	36	102
Total	31	4	4	0	0	39	44	5	6	0	0	55	1	187	34	0	0	222	12	154	32	0	0	198	514
Grand Total	582	108	148	0	0	838	617	90	76	1	0	784	42	1771	475	0	0	2288	131	1812	741	0	0	2684	6594
Apprch %	69.5	12.9	17.7	0.0	0.0		78.7	11.5	9.7	0.1	0.0		1.8	77.4	20.8	0.0	0.0		4.9	67.5	27.6	0.0	0.0		
Total %	8.8	1.6	2.2	0.0	0.0	12.7	9.4	1.4	1.2	0.0	0.0	11.9	0.6	26.9	7.2	0.0	0.0	34.7	2.0	27.5	11.2	0.0	0.0	40.7	
Cars, PU, Vans	582	108	148	0	0	838	617	90	76		0	784	42	1771	475	0		2288	131	1812	741		0	2684	6594
% Cars, PU, Vans	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-029
Location: Walter Way & Davidson Pkwy
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Walter Way Northbound					Walter Way Southbound					Davidson Pkwy Eastbound					Davidson Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM to 10:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	19	1	9	0	29	3	3	1	0	7	1	26	11	0	38	1	45	5	0	51	125
7:45 AM	10	3	2	0	15	2	1	0	0	3	1	26	10	0	37	6	46	16	0	68	123
8:00 AM	9	0	0	0	9	5	0	0	0	5	1	21	7	0	29	2	46	15	0	63	106
8:15 AM	13	3	1	0	17	2	3	1	0	6	1	32	8	0	41	1	42	7	0	50	114
Total Volume	51	7	12	0	70	12	7	2	0	21	4	105	36	0	145	10	179	43	0	232	468
% App. Total	72.9	10.0	17.1	0.0	100	57.1	33.3	9.5	0.0	100	2.8	72.4	24.8	0.0	100	4.3	77.2	18.5	0.0	100	
PHF					0.603					0.750					0.884					0.853	0.936
Cars, PU, Vans	51	7	12	0	70	12	7	2	0	21	4	105	36	0	145	10	179	43	0	232	468
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

NOON

	Walter Way Northbound					Walter Way Southbound					Davidson Pkwy Eastbound					Davidson Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 10:00 AM to 02:00 PM																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
1:00 PM	14	4	1	0	19	14	1	0	0	15	0	32	7	0	39	2	34	22	0	58	131
1:15 PM	5	2	6	0	13	20	4	2	0	26	3	37	8	0	48	2	36	19	0	57	144
1:30 PM	14	1	5	0	20	15	2	3	0	20	0	26	11	0	37	2	43	13	0	58	135
1:45 PM	15	2	3	0	20	10	1	2	0	13	2	37	10	0	49	2	38	20	0	60	142
Total Volume	48	9	15	0	72	59	8	7	0	74	5	132	36	0	173	8	151	74	0	233	552
% App. Total	66.7	12.5	20.8	0.0	100	79.7	10.8	9.5	0.0	100	2.9	76.3	20.8	0.0	100	3.4	64.8	31.8	0.0	100	
PHF					0.900					0.712					0.883					0.971	0.958
Cars, PU, Vans	48	9	15	0	72	59	8	7	0	74	5	132	36	0	173	8	151	74	0	233	552
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

PM

	Walter Way Northbound					Walter Way Southbound					Davidson Pkwy Eastbound					Davidson Pkwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 02:00 PM to 07:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	5	2	4	0	11	28	1	0	0	29	0	68	11	0	79	3	44	18	0	65	184
5:15 PM	11	1	2	0	14	14	3	0	0	17	0	70	13	0	83	2	42	14	0	58	172
5:30 PM	5	0	5	0	10	13	3	3	0	19	0	66	8	0	74	3	38	20	0	61	164
5:45 PM	8	1	5	0	14	12	1	0	0	13	1	64	8	0	73	2	57	15	0	74	174
Total Volume	29	4	16	0	49	67	8	3	0	78	1	268	40	0	309	10	181	67	0	258	694
% App. Total	59.2	8.2	32.7	0.0	100	85.9	10.3	3.8	0.0	100	0.3	86.7	12.9	0.0	100	3.9	70.2	26.0	0.0	100	
PHF					0.875					0.672					0.931					0.872	0.943
Cars, PU, Vans	29	4	16	0	49	67	8	3	0	78	1	268	40	0	309	10	181	67	0	258	694
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0

Project ID: 19-09344-030
Location: Flippen Rd & Fairhaven Rd
City: Stockbridge

Day: Thursday
Date: 05/09/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Flippen Rd Northbound						Flippen Rd Southbound						Fairhaven Rd Eastbound						Fairhaven Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	88	1	0	0	89	0	69	0	0	0	69	0	0	0	0	0	0	3	0	2	0	0	5	163
7:15 AM	0	109	2	0	0	111	1	84	0	0	0	85	0	0	0	0	0	0	7	0	3	0	0	10	206
7:30 AM	0	122	1	0	0	123	1	93	0	0	0	94	0	0	0	0	0	0	1	0	2	0	0	3	220
7:45 AM	0	128	2	0	0	130	1	94	0	0	0	95	0	0	0	0	0	0	2	0	3	0	0	5	230
Total	0	447	6	0	0	453	3	340	0	0	0	343	0	0	0	0	0	0	13	0	10	0	0	23	819
8:00 AM	0	103	0	0	0	103	1	68	0	0	0	69	0	0	0	0	0	0	2	0	0	0	0	2	174
8:15 AM	0	82	2	0	0	84	0	67	0	0	0	67	0	0	0	0	0	0	0	0	3	0	0	3	154
8:30 AM	0	98	3	0	0	101	0	81	0	0	0	81	0	0	0	0	0	0	2	0	1	0	0	3	185
8:45 AM	0	79	1	0	0	80	0	88	0	0	0	88	0	0	0	0	0	0	1	0	0	0	0	1	169
Total	0	362	6	0	0	368	1	304	0	0	0	305	0	0	0	0	0	0	5	0	4	0	0	9	682
BREAK																									
4:00 PM	0	132	0	0	0	132	2	123	0	0	0	125	0	0	0	0	0	0	1	0	0	0	0	1	258
4:15 PM	0	134	2	0	0	136	0	160	0	0	0	160	0	0	0	0	0	0	1	0	0	0	0	1	297
4:30 PM	0	98	3	0	0	101	1	137	0	0	0	138	0	0	0	0	0	0	2	0	1	0	0	3	242
4:45 PM	0	121	3	0	0	124	1	146	0	0	0	147	0	0	0	0	0	0	2	0	0	0	0	2	273
Total	0	485	8	0	0	493	4	566	0	0	0	570	0	0	0	0	0	0	6	0	1	0	0	7	1070
5:00 PM	0	116	3	0	0	119	0	162	0	0	0	162	0	0	0	0	0	0	6	0	0	0	0	6	287
5:15 PM	0	109	3	0	0	112	0	183	0	0	0	183	0	0	0	0	0	0	1	0	3	0	0	4	299
5:30 PM	0	147	1	0	0	148	1	192	0	0	0	193	0	0	0	0	0	0	0	0	1	0	0	1	342
5:45 PM	0	121	4	0	0	125	1	169	0	0	0	170	0	0	0	0	0	0	2	0	1	0	0	3	298
Total	0	493	11	0	0	504	2	706	0	0	0	708	0	0	0	0	0	0	9	0	5	0	0	14	1226
Grand Total	0	1787	31	0	0	1818	10	1916	0	0	0	1926	0	0	0	0	0	0	33	0	20	0	0	53	3797
Apprch %	0.0	98.3	1.7	0.0	0.0		0.5	99.5	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		62.3	0.0	37.7	0.0	0.0		
Total %	0.0	47.1	0.8	0.0	0.0	47.9	0.3	50.5	0.0	0.0	0.0	50.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.0	0.0	1.4	
Cars, PU, Vans	0	1787	31	0	0	1818	10	1916	0		0	1926	0	0	0	0		0	33	0	20		0	53	3797
% Cars, PU, Vans	0.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0

Project ID: 19-09344-030
Location: Flippen Rd & Fairhaven Rd
City: Stockbridge

PEAK HOURS

Day: Thursday
Date: 05/09/2019

AM

	Flippen Rd Northbound					Flippen Rd Southbound					Fairhaven Rd Eastbound					Fairhaven Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	109	2	0	111	1	84	0	0	85	0	0	0	0	0	7	0	3	0	10	206
7:30 AM	0	122	1	0	123	1	93	0	0	94	0	0	0	0	0	1	0	2	0	3	220
7:45 AM	0	128	2	0	130	1	94	0	0	95	0	0	0	0	0	2	0	3	0	5	230
8:00 AM	0	103	0	0	103	1	68	0	0	69	0	0	0	0	0	2	0	0	0	2	174
Total Volume	0	462	5	0	467	4	339	0	0	343	0	0	0	0	0	12	0	8	0	20	830
% App. Total	0.0	98.9	1.1	0.0	100	1.2	98.8	0.0	0.0	100	0.0	0.0	0.0	0.0	0	60.0	0.0	40.0	0.0	100	
PHF					0.898					0.903										0.500	0.902
Cars, PU, Vans	0	462	5	0	467	4	339	0	0	343	0	0	0	0	0	12	0	8	0	20	830
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

PM

	Flippen Rd Northbound					Flippen Rd Southbound					Fairhaven Rd Eastbound					Fairhaven Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	116	3	0	119	0	162	0	0	162	0	0	0	0	0	6	0	0	0	6	287
5:15 PM	0	109	3	0	112	0	183	0	0	183	0	0	0	0	0	1	0	3	0	4	299
5:30 PM	0	147	1	0	148	1	192	0	0	193	0	0	0	0	0	0	0	1	0	1	342
5:45 PM	0	121	4	0	125	1	169	0	0	170	0	0	0	0	0	2	0	1	0	3	298
Total Volume	0	493	11	0	504	2	706	0	0	708	0	0	0	0	0	9	0	5	0	14	1226
% App. Total	0.0	97.8	2.2	0.0	100	0.3	99.7	0.0	0.0	100	0.0	0.0	0.0	0.0	0	64.3	0.0	35.7	0.0	100	
PHF					0.851					0.917										0.583	0.896
Cars, PU, Vans	0	493	11	0	504	2	706	0	0	708	0	0	0	0	0	9	0	5	0	14	1226
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0

APPENDIX C: Traffic Counts

AR-ML-610 | **I-75 SOUTH EXPRESS LANES**

0013919 | FROM C.W. GRANT PARKWAY TO SR 138

Long Range

Jurisdiction: Regional - Southeast
Sponsor: GDOT
Service Type: **Roadway / Express Lanes**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
0	2	10.6	2040

LCI: ☐ Flex: ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE		LR 2024-2030	General Federal Aid 2024-2040	$10,035,970	$2,508,993	$0,000	$0,000	**$12,544,963**
ROW		LR 2024-2030	General Federal Aid 2024-2040	$20,903,213	$5,225,803	$0,000	$0,000	**$26,129,016**
CST		LR 2031-2040	General Federal Aid 2024-2040	$120,630,516	$30,157,629	$0,000	$0,000	**$150,788,145**
CST		LR 2031-2040	Public Private Partnership	$0,000	$0,000	$0,000	$123,372,118	**$123,372,118**
				$151,569,699	**$37,892,425**	**$0,000**	**$123,372,118**	**$312,834,242**

AR-ML-800 | **I-20 WEST EXPRESS LANES**

0013916 | FROM I-285 WEST TO SR 92 (FAIRBURN ROAD)

Programmed

Jurisdiction: Regional - West
Sponsor: GDOT
Service Type: **Roadway / Express Lanes**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
0	2	10.5	2040

LCI: ☐ Flex: ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2018	National Highway Performance Program (NHPP)	~~$800,000~~	~~$200,000~~	~~$0,000~~	~~$0,000~~	**$1,000,000**
PE		LR 2024-2030	National Highway Performance Program (NHPP)	$33,288,000	$8,322,000	$0,000	$0,000	**$41,610,000**
ROW		LR 2024-2030	National Highway Performance Program (NHPP)	$7,736,000	$1,934,000	$0,000	$0,000	**$9,670,000**
ROW		LR 2031-2040	National Highway Performance Program (NHPP)	$7,736,000	$1,934,000	$0,000	$0,000	**$9,670,000**
CST		LR 2031-2040	National Highway Performance Program (NHPP)	$571,704,000	$142,926,000	$0,000	$0,000	**$714,630,000**
CST		LR 2041+	General Federal Aid 2041+	$231,898,153	$57,974,538	$0,000	$0,000	**$289,872,691**
ALL		LR 2031-2040	Toll Revenue Bonds	$0,000	$0,000	$0,000	$165,000,000	**$165,000,000**
				$853,162,153	**$213,290,538**	**$0,000**	**$165,000,000**	**$1,231,452,691**

CL-019

MOUNT ZION BOULEVARD WIDENING

751770-

FROM SOUTHLAKE PARKWAY TO SOMERTON DRIVE

Programmed

Jurisdiction Clayton County

Sponsor Clayton County

Existing	Planned	Length (mi.)	Network Year
2	4	3.5	2030

Service Type Roadway / General Purpose Capacity

Analysis In the Region's Air Quality Conformity Analysis

LCI ☐ **Flex** ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	1997	Local Jurisdiction/Municipality Funds	~~$0,000~~	~~$0,000~~	~~$1,162,865~~	~~$0,000~~	**$1,162,865**
PE	AUTH	1997	STP - Statewide Flexible (GDOT)	~~$68,000~~	~~$17,000~~	~~$0,000~~	~~$0,000~~	**$85,000**
PE	AUTH	2014	STP - Statewide Flexible (GDOT)	~~$40,000~~	~~$10,000~~	~~$0,000~~	~~$0,000~~	**$50,000**
ROW	AUTH	2016	Local Jurisdiction/Municipality Funds	~~$0,000~~	~~$0,000~~	~~$12,550,000~~	~~$0,000~~	**$12,550,000**
UTL		2020	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$2,057,256	$0,000	**$2,057,256**
CST		2020	Transportation Funding Act (HB 170)	$0,000	$15,432,175	$0,000	$0,000	**$15,432,175**
CST		2020	Surface Transportation Block Grant (STBG) Program - Urban (>200K) (ARC)	$5,800,889	$924,000	$526,222	$0,000	**$7,251,111**
				$5,908,889	**$16,383,175**	**$16,296,343**	**$0,000**	**$38,588,407**

CL-063

MOUNT ZION ROAD WIDENING

N/A

FROM RICHARDSON PARKWAY TO SR 138

Programmed

Jurisdiction Clayton County

Sponsor Clayton County

Existing	Planned	Length (mi.)	Network Year
2	4	2.1	2030

Service Type Roadway / General Purpose Capacity

Analysis In the Region's Air Quality Conformity Analysis

LCI ☐ **Flex** ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2005	Local Jurisdiction/Municipality Funds	~~$0,000~~	~~$0,000~~	~~$650,000~~	~~$0,000~~	**$650,000**
ROW		LR 2024-2030	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$4,100,000	$0,000	**$4,100,000**
CST		LR 2024-2030	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$10,000,000	$0,000	**$10,000,000**
				$0,000	**$0,000**	**$14,750,000**	**$0,000**	**$14,750,000**

CL-064	**US 23 WIDENING**	**Jurisdiction** Clayton County	**Existing**	**Planned**	**Length (mi.)**	**Network Year**
322050-	FROM SR 138 (NORTH HENRY BOULEVARD) TO I-675 IN CLAYTON COUNTY	**Sponsor** GDOT	**2**	**4**	**2.5**	**2030**
Programmed		**Service Type** **Roadway / General Purpose Capacity**	**Analysis** In the Region's Air Quality Conformity Analysis			**LCI** ☐ **Flex** ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	1992	STP - Urban (>200K) (ARC)	~~$926,856~~	~~$231,714~~	~~$0,000~~	~~$0,000~~	**$1,158,570**
PE	AUTH	2013	STP - Statewide Flexible (GDOT)	~~$240,000~~	~~$60,000~~	~~$0,000~~	~~$0,000~~	**$300,000**
PE	AUTH	2014	STP - Statewide Flexible (GDOT)	~~$960,000~~	~~$240,000~~	~~$0,000~~	~~$0,000~~	**$1,200,000**
PE	AUTH	2018	Transportation Funding Act (HB 170)	~~$0,000~~	~~$400,000~~	~~$0,000~~	~~$0,000~~	**$400,000**
PE	AUTH	2019	Transportation Funding Act (HB 170)	~~$0,000~~	~~$700,000~~	~~$0,000~~	~~$0,000~~	**$700,000**
ROW	AUTH	2018	Transportation Funding Act (HB 170)	~~$0,000~~	~~$11,182,000~~	~~$0,000~~	~~$0,000~~	**$11,182,000**
UTL		2022	Transportation Funding Act (HB 170)	$0,000	$2,130,000	$0,000	$0,000	**$2,130,000**
CST		2022	Transportation Funding Act (HB 170)	$0,000	$24,932,647	$0,000	$0,000	**$24,932,647**
				$2,126,856	**$39,876,361**	**$0,000**	**$0,000**	**$42,003,217**

HE-020A | **SR 20/81 (HAMPTON STREET): SEGMENT 1 - NEW ALIGNMENT**

0013531 | FROM EAST OF I-75 SOUTH TO PHILLIPS DRIVE

Programmed

Jurisdiction: Henry County | Sponsor: GDOT | Service Type: **Roadway / General Purpose Capacity** | Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	1.4	2030

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2013	STP - Statewide Flexible (GDOT)	~~$56,000~~	~~$14,000~~	~~$0,000~~	~~$0,000~~	**$70,000**
PE	AUTH	2016	STP - Statewide Flexible (GDOT)	~~$1,986,376~~	~~$496,594~~	~~$0,000~~	~~$0,000~~	**$2,482,970**
ROW	AUTH	2018	Transportation Funding Act (HB 170)	~~$0,000~~	~~$3,642,000~~	~~$0,000~~	~~$0,000~~	**$3,642,000**
ROW	AUTH	2019	Transportation Funding Act (HB 170)	~~$0,000~~	~~$7,978,000~~	~~$0,000~~	~~$0,000~~	**$7,978,000**
UTL		2021	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$2,120,054	$0,000	**$2,120,054**
CST		2021	Transportation Funding Act (HB 170)	$0,000	$13,601,829	$0,000	$0,000	**$13,601,829**
				$2,042,376	**$25,732,423**	**$2,120,054**	**$0,000**	**$29,894,853**

HE-107 | **US 23 WIDENING**

0007855 | FROM DOWNTOWN MCDONOUGH TO SR 138 (NORTH HENRY BOULEVARD)

Programmed

Jurisdiction: Henry County | Sponsor: GDOT | Service Type: **Roadway / General Purpose Capacity** | Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	7.3	2030

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
SCP	AUTH	2015	STP - Statewide Flexible (GDOT)	~~$455,214~~	~~$113,803~~	~~$0,000~~	~~$0,000~~	**$569,017**
PE	AUTH	2017	Transportation Funding Act (HB 170)	~~$0,000~~	~~$3,787,485~~	~~$0,000~~	~~$0,000~~	**$3,787,485**
ROW		2022	Transportation Funding Act (HB 170)	$0,000	$14,649,667	$0,000	$0,000	**$14,649,667**
ROW		2023	Transportation Funding Act (HB 170)	$0,000	$14,649,667	$0,000	$0,000	**$14,649,667**
UTL		2023	Transportation Funding Act (HB 170)	$0,000	$8,179,300	$0,000	$0,000	**$8,179,300**
CST		2023	Transportation Funding Act (HB 170)	$0,000	$64,138,927	$0,000	$0,000	**$64,138,927**
				$455,214	**$105,518,849**	**$0,000**	**$0,000**	**$105,974,063**

HE-109 | **ROCK QUARRY ROAD EXTENSION - NEW ALIGNMENT**

N/A

Long Range

FROM SR 138 / US 23 TO INTERSECTION OF EAST ATLANTA ROAD AND VALLEY HILL ROAD

Jurisdiction: Henry County
Sponsor: City of Stockbridge
Service Type: Roadway / General Purpose Capacity
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
0	2	0.8	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2009	Local Jurisdiction/Municipality Funds	~~$0,000~~	~~$0,000~~	~~$320,000~~	~~$0,000~~	**$320,000**
ROW		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$2,000,000	$0,000	**$2,000,000**
CST		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$3,120,000	$0,000	**$3,120,000**
				$0,000	**$0,000**	**$5,440,000**	**$0,000**	**$5,440,000**

HE-113 | **SR 155 WIDENING**

0007856

Programmed

FROM I-75 SOUTH TO SR 42/US 23

Jurisdiction: Henry County
Sponsor: GDOT
Service Type: Roadway / General Purpose Capacity
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	1.6	2030

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
SCP	AUTH	2016	Transportation Funding Act (HB 170)	~~$0,000~~	~~$709,302~~	~~$0,000~~	~~$0,000~~	**$709,302**
PE	AUTH	2016	Transportation Funding Act (HB 170)	~~$0,000~~	~~$2,290,698~~	~~$0,000~~	~~$0,000~~	**$2,290,698**
ROW		2021	Transportation Funding Act (HB 170)	$0,000	$1,398,864	$0,000	$0,000	**$1,398,864**
UTL		2023	Transportation Funding Act (HB 170)	$0,000	$3,300,000	$0,000	$0,000	**$3,300,000**
CST		2023	Transportation Funding Act (HB 170)	$0,000	$36,121,215	$0,000	$0,000	**$36,121,215**
				$0,000	**$43,820,079**	**$0,000**	**$0,000**	**$43,820,079**

HE-126A1 | **HAMPTON LOCUST GROVE ROAD WIDENING**

N/A

FROM SR 20 (MCDONOUGH ROAD) TO SR 155

Long Range

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: **Roadway / General Purpose Capacity**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	5.8	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$18,000,000	$0,000	**$18,000,000**
				$0,000	**$0,000**	**$18,000,000**	**$0,000**	**$18,000,000**

HE-126B | **BILL GARDNER PARKWAY WIDENING**

0000562

AT SR 155 TO LESTER MILL ROAD (4 LANES) AND FROM LESTER MILL ROAD TO I-75 SOUTH (6 LANES)

Long Range

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: **Roadway / General Purpose Capacity**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4/6	3.4	2030

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2024-2030	General Federal Aid 2024-2040	$14,400,000	$0,000	$3,600,000	$0,000	**$18,000,000**
				$14,400,000	**$0,000**	**$3,600,000**	**$0,000**	**$18,000,000**

HE-132C | **EAGLES LANDING PARKWAY WIDENING**

N/A

FROM EAGLES POINTE PARKWAY TO US 23

Long Range

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: **Roadway / General Purpose Capacity**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
4	6	2.2	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$19,000,000	$0,000	**$19,000,000**
				$0,000	**$0,000**	**$19,000,000**	**$0,000**	**$19,000,000**

HE-138 | **OLD CONYERS ROAD WIDENING**

N/A

FROM EAST ATLANTA ROAD TO FLAT ROCK ROAD

Long Range

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: **Roadway / General Purpose Capacity**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	2.5	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$15,700,000	$0,000	**$15,700,000**
				$0,000	**$0,000**	**$15,700,000**	**$0,000**	**$15,700,000**

HE-139 | **KELLEYTOWN ROAD WIDENING**

N/A

FROM SR 155 TO AIRLINE ROAD

Long Range

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: **Roadway / General Purpose Capacity**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	3.5	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$22,300,000	$0,000	**$22,300,000**
				$0,000	**$0,000**	**$22,300,000**	**$0,000**	**$22,300,000**

HE-140 | **MILLERS MILL ROAD WIDENING**

N/A

FROM SR 138 TO SR 155

Long Range

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: **Roadway / General Purpose Capacity**
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	3.8	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$17,600,000	$0,000	**$17,600,000**
				$0,000	**$0,000**	**$17,600,000**	**$0,000**	**$17,600,000**

HE-141 | **SWAN LAKE ROAD / OLD CONYERS ROAD WIDENING**

N/A | FROM FAIRVIEW ROAD TO FLAT ROCK ROAD

Long Range

Jurisdiction: Henry County | Sponsor: Henry County | Service Type: **Roadway / General Purpose Capacity** | Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	3.1	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$19,600,000	$0,000	**$19,600,000**
				$0,000	**$0,000**	**$19,600,000**	**$0,000**	**$19,600,000**

HE-161A | **ROCK QUARRY ROAD WIDENING**

0015090 | FROM EAGLES LANDING PARKWAY TO SR 42 / SR 138

Programmed

Jurisdiction: Henry County | Sponsor: Henry County | Service Type: **Roadway / General Purpose Capacity** | Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	2.6	2030

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2017	Surface Transportation Block Grant (STBG) Program - Urban (>200K) (ARC)	~~$1,200,000~~	~~$0,000~~	~~$300,000~~	~~$0,000~~	**$1,500,000**
ROW		2020	Surface Transportation Block Grant (STBG) Program - Urban (>200K) (ARC)	$5,600,000	$0,000	$1,571,200	$0,000	**$7,171,200**
CST		LR 2024-2030	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$24,310,000	$0,000	**$24,310,000**
				$6,800,000	**$0,000**	**$26,181,200**	**$0,000**	**$32,981,200**

HE-165B | **PATRICK HENRY PARKWAY: SEGMENT 2 - WIDENING**

N/A | FROM JODECO ROAD TO EAGLES LANDING PARKWAY

Long Range

Jurisdiction: Henry County | Sponsor: Henry County | Service Type: **Roadway / General Purpose Capacity** | Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
2	4	2	2040

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ALL		LR 2031-2040	Local Jurisdiction/Municipality Funds	$0,000	$0,000	$12,700,000	$0,000	**$12,700,000**
				$0,000	**$0,000**	**$12,700,000**	**$0,000**	**$12,700,000**

HE-179 | **WESTERN PARALLEL CONNECTOR - NEW ALIGNMENT**

0014482 | FROM JONESBORO ROAD TO HUDSON BRIDGE ROAD

Programmed

Jurisdiction: Henry County
Sponsor: GDOT
Service Type: Roadway / General Purpose Capacity
Analysis: In the Region's Air Quality Conformity Analysis

Existing	Planned	Length (mi.)	Network Year
0	4	3.3	2030

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
SCP	AUTH	2017	Transportation Funding Act (HB 170)	~~$0,000~~	~~$1,000,000~~	~~$0,000~~	~~$0,000~~	**$1,000,000**
PE	AUTH	2018	Transportation Funding Act (HB 170)	~~$0,000~~	~~$2,000,000~~	~~$0,000~~	~~$0,000~~	**$2,000,000**
ROW		2020	Transportation Funding Act (HB 170)	$0,000	$6,000,000	$0,000	$0,000	**$6,000,000**
UTL		2023	Transportation Funding Act (HB 170)	$0,000	$1,200,000	$0,000	$0,000	**$1,200,000**
CST		2023	Transportation Funding Act (HB 170)	$0,000	$43,974,000	$0,000	$0,000	**$43,974,000**
				$0,000	**$54,174,000**	**$0,000**	**$0,000**	**$54,174,000**

HE-198 | **PANOLA MOUNTAIN GREENWAY TRAIL**

0015743 | FROM AUSTIN MIDDLE SCHOOL TO FAIRVIEW LIBRARY

Programmed

Jurisdiction: Henry County
Sponsor: Henry County
Service Type: Last Mile Connectivity / Sidepaths and Trails
Analysis: Exempt from Air Quality Analysis (40 CFR 93)

Existing	Planned	Length (mi.)	Network Year
N/A	N/A	N/A	TBD

LCI ☐ Flex ☐

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
CST		2021	Transportation Alternatives (Section 133(h)) - Urban (>200K) (ARC)	$1,172,000	$0,000	$293,000	$0,000	**$1,465,000**
				$1,172,000	**$0,000**	**$293,000**	**$0,000**	**$1,465,000**

Short Term Action Plan (2016 - 2021)								
Road Widenings								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
R-8	Y	HE-113	SR 155 WIDENING	FROM I-75 SOUTH TO SR 42	Adding 1 lane in each direction	**$ 20,231,053**	$ -	Fully funded in TIP
R-5	Y	HE-020A	SR 20/81 (HAMPTON STREET): SEGMENT 1 - NEW ALIGNMENT	FROM EAST OF I-75 SOUTH TO PHILLIPS DRIVE	Adding 1 lane in each direction	**$ 15,572,828**	$ 1,590,000	Fully funded in TIP
R-52	N	NA	SR 155 WIDENING	BETWEEN BILL GARDNER PARKWAY AND I-75/SR 155 INTERCHANGE	Primary Congestion Corridor/ Adding 1 lane in each direction. Project would include widening I-75 underpass.	**$ 38,165,800**	$ 7,633,160	Project not yet funded. 20% local funding 80% federal and/or state. Coordination with GDOT needed to move project forward
R-10	Y	HE-920B	SR 920 (MCDONOUGH ROAD / JONESBORO ROAD) WIDENING	FROM US 19/41 (TARA BOULEVARD) IN CLAYTON COUNTY TO I-75 SOUTH IN HENRY COUNTY	Adding one lane in each direction	**$ 74,079,949**	$ -	Fully funded in TIP
R-7	Y	HE-107	US 23 WIDENING	FROM DOWNTOWN MCDONOUGH TO SR 138 (NORTH HENRY BOULEVARD)	Adding 1 lane in each direction	**$ 90,304,371**	$ 12,466,039	UTL and Construction phase funding not yet identified. 20% local match allocated to keep project moving forward and/or fully fund "Main Street Henry" concept.
R-6	Y	HE-020B	SR 20/81 (HAMPTON STREET / KEYS FERRY ROAD) - EXTENSION AND UPGRADE OF ONE-WAY PAIR THROUGH DOWNTOWN MCDONOUGH	FROM WEST OF NORFOLK SOUTHERN RAIL LINE TO EAST OF LEMON STREET	Adding 1 lane in each direction	**$ 8,200,035**	$ -	Fully funded in TIP
R-34 (A)	Y	HE-05	SR 81 WIDENING	FROM LEMON STREET TO N BETHANY ROAD	Primary Congestion Corridor/ Adding 1 lane in each direction	**$ 23,020,000**	$ 4,304,000	ROW and CST phase funding not yet identified. 20% local funding allocated to move project forward. 80% federally funded.
R-9	Y	HE-161A	ROCK QUARRY ROAD WIDENING	FROM EAGLES LANDING PARKWAY TO SR 138	Adding 1 lane in each direction	**$ 32,981,200**	$ 31,781,200	Funding available in SPLOST IV
New Roads								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
R-78	N	NA	MCDONOUGH PARKWAY EXTENSION (MCDONOUGH BYPASS): PHASE II	FROM SR 155 (DECATUR ROAD) TO SR 20 (CONYERS HIGHWAY / LAWRENCEVILLE STREET)	Paving Turner Church road as a two lane rural section	**$ 1,802,000**	Fully funded in SPLOST IV	Fully funded in SPLOST IV
R-2	Y	HE-179	WESTERN PARALLEL CONNECTOR - NEW ALIGNMENT	FROM JONESBORO ROAD TO HUDSON BRIDGE ROAD	New 2 lane roadway	**$ 16,950,000**		
R-1	Y	HE-118B	MCDONOUGH PARKWAY EXTENSION (MCDONOUGH BYPASS): PHASE II - NEW ALIGNMENT	FROM US 23 (ATLANTA STREET) TO SR 155 (DECATUR ROAD)	New 4 lane roadway	**$ 5,700,000**	$ 5,700,000	Fully funded in SPLOST IV
R-27	Y	HE-118E	MCDONOUGH PKWY EXTENSION (MCDONOUGH BYPASS): PHASE IV - NEW ALIGNMENT	FROM SR 20/81 (HAMPTON STREET) TO HENRY PARKWAY	New 4 lane roadway	**$ 25,000,000**	$ 25,000,000	Fully funded in SPLOST IV
Arterial Upgrade								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
R-49 (A)	N	NA	CHAMBERS ROAD	BETWEEN JODECO ROAD AND SR 81	Connectivity	**$ 6,106,332**	$ 6,106,332	Local project
Active Transportation								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
MU-67	N	NA			Multi-use greenway trail	**$11,980,207**	$ 200,000	PE phase only funding in short term action plan
	N	**NA**	**Sidewalk Program**	**Countywide**	**Sidewalk program to be funded at $5 million per year.**	**$ 10,000,000**	**$ 10,000,000**	**Locally funded program**
BP-208	N	NA	Central Avenue	Between College Street and W Main Street	Adding sidewalks and crosswalks on both sides of street.	$94,329		Sidewalk Program
BP-138	N	NA	Walt Stephens Road	Between Henry County-Clayton County border and Flippen Road	Adding sidewalks and crosswalks on both sides of street.	$1,985,108		Sidewalk Program
BP-222	N	NA	Woolsey Road	Between US 19/41 and West Main Street	Adding sidewalks and crosswalks on both sides of street.	$771,977		Sidewalk Program
BP-107	N	NA	Fairview Road	Between Clark Drive and Panola Road	Adding sidewalks and crosswalks on both sides of street.	$605,421		Sidewalk Program
BP-116	N	NA	Thurman Road	Between Fairview Road and Barber Drive	Adding sidewalks and crosswalks on both sides of street.	$411,373		Sidewalk Program
BP-118	N	NA	Gardner Road	Between Patillo Road and Swan Lake Road	Adding sidewalks and crosswalks on both sides of street.	$865,010		Sidewalk Program
BP-127	N	NA	E Atlanta Road	Between Stagecoach Road and Valley Hill Road	Adding sidewalks and crosswalks on both sides of street.	$644,936		Sidewalk Program
BP-137	N	NA	Speer Road/Blackhall Road	Between Old Speer Road and Elderberry Road	Adding sidewalks and crosswalks on both sides of street.	$1,394,287		Sidewalk Program
BP-144	N	NA	SR 42	Between Kensington Trce and Huntington Drive	Adding sidewalks and crosswalks on both sides of street.	$3,474,570		Sidewalk Program
BP-209	N	NA	Old Highway 3/Main Street	Between SR 81 and Emory Street	Adding sidewalks and crosswalks on both sides of street.	$2,412,992		Sidewalk Program
Intersections								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
I-81	N	NA	SR 81 @ Old Hwy 3	SR 81 @ Old Hwy 3	Short term improvement - WB right-turn lane	**$ 514,250**	$ 514,250	Local project
I-84	N	NA	SR 20 @ SR 81	SR 20 @ SR 81	Add second SB Left-turn lane	**$ 660,000**	$ 660,000	Local project

APPENDIX A: Project List

Transit								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
T-1	N	NA	New Xpress Service to Airport	Between Henry County and Hartfield-Jackson AIA	Partnership with Xpress to help start new bus service. SPLOST funding could be used to buy buses, build/enhance park & ride lot, and/or Xpress southside maintenance facility	**$ 1,000,000**	$ 1,000,000	Partnership with Xpress
Studies								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
S-1	N	NA	I-75 Collector-Distributor Lanes Feasibility Study	Between Eagles Landing/Hudson Bridge Road and SR 155	Study to determine the feasibility of building collector distributor lanes along I-75 south to facilitate local trips. It will be important to coordinate with the proposed Truck Only Lanes project	**$ 500,000**	$ 500,000	Local project
S-2	N	NA	Greenway Trail Master Plan	Entire County	Study to drill down specifically on greenway trails alingments, feasibility, and costs.	**$ 125,000**	$ 125,000	Local project
S-3	Y	HE-199	I-75 Freight Interchange IJR	I-75 at Bethlehem Bottoms Rd	Interchange justification report to examine the possibility of adding an interchange between SR 155 and Bill Gardner Pkwy	**$ 5,000,000**	$ 5,000,000	Local project
S-4	Y	NA	SR-155 Interchange Modification Report	SR-155 @I-75	Interchange modification report to determine the possibility of modifying the interchange to allow the widening of SR 155 to four lanes	**$ 325,000**	$ 325,000	Local project

APPENDIX A: Project List

Mid Range (2022 - 2030)							
Widening							
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
R-56 (B)	N	NA	JODECO ROAD/HUDSON BRIDGE ROAD WIDENING	BETWEEN FLOYD RD AND HUDSON BRIDGE RD	Primary Congestion Corridor / Adding 1 lane in each direction	**$ 28,715,062**	$ 5,743,012	Regional project. Target Federal and state funding. Allocating 20% match
R-54	N	NA	W PANOLA ROAD WIDENING	BETWEEN FAIRVIEW ROAD AND HENRY COUNTY-CLAYTON COUNTY BORDER	Secondary Congestion Corridor / Adding 1 lane in each direction	**$ 9,875,067**	$ 9,875,067	Locally funded project
R-41 (A)	N	NA	KING MILL ROAD WIDENING	BETWEEN SR 155 SR 42/US 23	Secondary Congestion Corridor/ Adding 1 lane in each direction	**$ 19,893,000**	$ 3,978,600.0	Regional project. Target Federal and state funding. Allocating 20% match
R-30	N	NA	SR 138 WIDENING	FROM SR 42 TO SR 155	Adding 1 lane in each direction	**$ 46,411,559**	$ -	Target Federal and State funding
						$ 104,894,688	$ 19,596,679	
New Road							
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
R-24	N		ROCK QUARRY ROAD EXTENSION - NEW ALIGNMENT	FROM SR 138 / US 23 TO INTERSECTION OF EAST ATLANTA ROAD AND VALLEY HILL ROAD	New 2 lane roadway	**$ 5,120,000**	$ 5,120,000	Locally funded project
R-72 (A)	N	NA	NEW I-75 FREIGHT INTERCHANGE	BETWEEN KING MILL ROAD AND BETHLEHEM BOTTOMS ROAD	Connectivity - New two or four lane roadway including a new I-75 interchange serving freight intensive land use	**$ 47,037,229**	$ 23,518,615	County will fund 50% of total project cost to help move project forward
R-65 (B)	N	NA	BRIDGES ROAD EXTENSION OVER I-75	BETWEEN BRIDGES ROAD AND SR 81	Connectivity - New two lane road extending from Willow Rd across I-75 and connecting to SR 81 in the vicinity of Oakland Rd	**$32,223,136**	$32,223,136	Locally funded project
R-45 (C)	N	NA	AIRLINE ROAD EXTENSION	BETWEEN RODGERS ROAD TO SR 81	Connectivity - New two or four lane roadway needed to complete north-south connectivity corridor utilizing Airline Rd and Old Jackson Rd	**$ 43,573,884**	$ 43,573,884	Locally funded project
						$ 127,954,249	$ 104,435,635	
Arterial Upgrades							
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
R-64	N	NA	FLAT ROCK ROAD-OLD CONYERS ROAD	BETWEEN EAST ATLANTA ROAD AND SR 138	Connectivity	**$ 184,011**	$ 184,011	Part of maintenance program
R-28	N	NA	FLAKESMILL ROAD	FROM WINDMILL ROAD (HENRY COUNTY-DEKALB COUNTY BORDER) TO PANOLA ROAD	Secondary Congestion Corridor	**$ 31,971**	$ 31,971	Part of maintenance program
R-48	N	NA	MILL ROAD	BETWEEN JONESBORO ROAD AND MOUNT CARMEL ROAD	Secondary Congestion Corridor	**$ 49,538**	$ 49,538	Part of maintenance program
R-46	N	NA	EAST LAKE ROAD	BETWEEN SR 155 AND AIRLINE ROAD	Secondary Congestion Corridor	**$ 114,020**	$ 114,020	Part of maintenance program
R-72 (B)	N	NA	WESTRIDGE PARKWAY	BETWEEN SR 155 AND BETHLEHEM BOTTOMS ROAD	Connectivity - Truck friendly operational improvements along Thoroughbred Rd/Greenwood Rd/Greenwood Insutrial Pkwy/Bethlehem Bottoms Rd. Creates continuous southern bypass of McDonough	**$ 85,461**	$ 85,461	Locally funded project
R-77	N	NA	SR 138 OPERATIONAL IMPROVEMENTS	FROM DAVIS ROAD TO MILLERS MILL ROAD	Adding raised center median	**$ 37,036,862**	$ 37,036,862	Locally funded project
R-37	N	NA	BILL GARDNER PARKWAY OPERATIONAL IMPROVEMENTS	FROM I-75 SOUTH TO SR 42	Primary Congestion Corridor/ Access Management Project. Adding a raised center median.	**$ 21,400,038**	$ 21,400,038	Locally funded project
						$ 58,901,901	$ 58,901,901	
Active Transportation								
Project Code	**TIP**	**ARC ID**	**Name**	**Extent**	**Description**	**Project Cost**	**County Funding**	**Notes**
	N	**NA**	**Sidewalk Program**	**Countywide**	**Sidewalk program to be funded at $5 million per year.**	**$ 45,000,000**	**$ 45,000,000**	**Locally funded program**
BP-144	N	NA	SR 42	Between Kensington Trce and Huntington Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 3,474,570**	$ 3,474,570	Sidewalk program
BP-211	N	NA	Oak Street	Between SR 3 and Steele Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 3,474,570**	$ 3,474,570	Sidewalk program
BP-213	N	NA	David Road	Between SR 81 and Steele Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 392,864**	$ 392,864	Sidewalk program
BP-223	N	NA	Old Griffin Road	Between Woolsey Road and Bonie Glen Lane	Adding sidewalks and crosswalks on both sides of street.	**$ 378,188**	$ 378,188	Sidewalk program
BP-165	N	NA	Jonesboro Road/Jonesboro Street	Between Doris Street and Marian's Way	Adding sidewalks and crosswalks on both sides of street.	**$ 227,034**	$ 227,034	Sidewalk program
BP-202	N	NA	LG Griffin Road	Between SR 42 and Cleveland Avenue	Adding sidewalks and crosswalks on both sides of street.	**$ 55,125**	$ 55,125	Sidewalk program
BP-105	N	NA	Fairview Road	Between Bond Drive and Anvil Block Road	Adding sidewalks and crosswalks on both sides of street.	**$ 758,971**	$ 758,971	Sidewalk program
BP-108	N	NA	Clark Drive	Between Rowan Road and Fairview Road	Adding sidewalks and crosswalks on both sides of street.	**$ 256,474**	$ 256,474	Sidewalk program
BP-109	N	NA	E Atlanta Road	Between Fairview Road and Northtowne Cove	Adding sidewalks and crosswalks on both sides of street.	**$ 238,323**	$ 238,323	Sidewalk program
BP-119	N	NA	E Atlanta Road	Between Wayne J.Stokes Drive and Flat Rock Road	Adding sidewalks and crosswalks on both sides of street.	**$ 875,293**	$ 875,293	Sidewalk program
BP-124	N	NA	Old Conyers Road	Between Old Ivy Road and Circle Creek Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 592,509**	$ 592,509	Sidewalk program
BP-128	N	NA	Davis Road	Between Adrian Drive and Shields Road	Adding sidewalks and crosswalks on both sides of street.	**$ 374,252**	$ 374,252	Sidewalk program

BP-134	N	NA	Millers Mill Road	Between Summertown Drive and Bent Arrow Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 259,893**	$ 259,893	Sidewalk program
BP-135	N	NA	SR 138	Between Speer Road and N Mill Road	Adding sidewalks and crosswalks on both sides of street.	**$ 154,545**	$ 154,545	Sidewalk program
BP-141	N	NA	Flippen Road	Between SR 42 and Vincent Avenue	Adding sidewalks and crosswalks on both sides of street.	**$ 2,501,511**	$ 2,501,511	Sidewalk program
BP-143	N	NA	Brannan Road	Between SR 42 and Springdale Road	Adding sidewalks and crosswalks on both sides of street.	**$ 984,901**	$ 984,901	Sidewalk program
BP-146	N	NA	Jodeco Road	Between Noahs Ark Road and Chambers Road	Adding sidewalks and crosswalks on both sides of street.	**$ 2,087,215**	$ 2,087,215	Sidewalk program
BP-150	N	NA	Jodeco Road	Between Meadowbrook Drive and SR 42	Adding sidewalks and crosswalks on both sides of street.	**$ 1,853,354**	$ 1,853,354	Sidewalk program
BP-151	N	NA	Dailey Mill Road	Between Jodeco Road and Dailey's Plantation Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 483,908**	$ 483,908	Sidewalk program
BP-155	N	NA	Jonesboro Road	Between N Mt.Carmel Road and Jonesboro Road/I-75 Interchange	Adding sidewalks and crosswalks on both sides of street.	**$ 1,836,483**	$ 1,836,483	Sidewalk program
BP-159	N	NA	Mt. Carmel Road	Between Mill Road and Bridges Road	Adding sidewalks and crosswalks on both sides of street.	**$ 646,358**	$ 646,358	Sidewalk program
BP-160	N	NA	Bridges Road	Between Mt.Carmel Road and SR 20	Adding sidewalks and crosswalks on both sides of street.	**$ 2,737,241**	$ 2,737,241	Sidewalk program
BP-167	N	NA	SR 155	Between Turner Church Road and Fairview Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 1,239,959**	$ 1,239,959	Sidewalk program
BP-170	N	NA	McGarity Road	Between SR 20 and Duffy Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 2,317,946**	$ 2,317,946	Sidewalk program
BP-173	N	NA	SR 81	Between Dickerson Street and Travis Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 847,175**	$ 847,175	Sidewalk program
BP-176	N	NA	S Zack Hinton Parkway	Between College Street and Commerce Pl	Adding sidewalks and crosswalks on both sides of street.	**$ 598,150**	$ 598,150	Sidewalk program
BP-181	N	NA	SR 155	Between City Square Blvd and SR-155/I-75 Interchange	Adding sidewalks and crosswalks on both sides of street.	**$ 1,622,501**	$ 1,622,501	Sidewalk program
BP-190	N	NA	SR 20	Between Oakland Road and Industrial Parkway	Adding sidewalks and crosswalks on both sides of street.	**$ 1,607,390**	$ 1,607,390	Sidewalk program
BP-199	N	NA	Grove Road	Between Peeksville Road and Jackson Street	Adding sidewalks and crosswalks on both sides of street.	**$ 796,951**	$ 796,951	Sidewalk program
BP-200	N	NA	SR 42	Between LG Griffin Road and Cotton Fields Road	Adding sidewalks and crosswalks on both sides of street.	**$ 1,474,650**	$ 1,474,650	Sidewalk program
BP-201	N	NA	Cotton Fields Road	Between SR 42 and S Unity Grove Road	Adding sidewalks and crosswalks on both sides of street.	**$ 231,187**	$ 231,187	Sidewalk program
BP-203	N	NA	Jackson Street	Between Grove Road and SR 42	Adding sidewalks and crosswalks on both sides of street.	**$ 964,278**	$ 964,278	Sidewalk program
BP-204	N	NA	Peeksville Road	Between Club Drive and N Unity Grove Road	Adding sidewalks and crosswalks on both sides of street.	**$ 1,282,714**	$ 1,282,714	Sidewalk program
BP-112	N	NA	Austin Road	Between Scarborough Road and Forest Oak Drive	Adding sidewalks and crosswalks on both sides of street.	**$ 1,236,221**	$ 1,236,221	Sidewalk program
BP-114	N	NA	Fairview Road	Between Horris A. Ward Fairview Chapel and Austin Road	Adding sidewalks and crosswalks on both sides of street.	**$ 2,770,047**	$ 2,770,047	Sidewalk program
BP-115	N	NA	Austin Road	Between Melissa Drive and Fairview Road	Adding sidewalks and crosswalks on both sides of street.	**$ 480,381**	$ 480,381	Sidewalk program
BP-117	N	NA	Rex Road	Between Wilkerson Road and Thurman Road	Adding sidewalks and crosswalks on both sides of street.	**$ 1,750,967**	$ 1,750,967	Sidewalk program
BP-120	N	NA	Thurman Road	Between Patillo Road and E Atlanta Road	Adding sidewalks and crosswalks on both sides of street.	**$ 829,583**	$ 829,583	Sidewalk program
BP-122	N	NA	Flat Rock Road	Between E Atlanta Road and Millers Mill Road	Adding sidewalks and crosswalks on both sides of street.	**$ 4,001,641**	$ 4,001,641	Sidewalk program
						$ 45,805,337	$ 45,000,000	

Greenway Trails

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
MU-67	N	NA			Multi-use greenway trail	**$11,980,207**	$11,980,207	Locally funded project
MU-70	N	NA			Multi-use greenway trail	**$10,580,189**	$10,580,189	Locally funded project
MU-72	N	NA			Multi-use greenway trail	**$2,246,442**	$2,246,442	Locally funded project
MU-82	N	NA			Multi-use greenway trail	**$4,009,134**	$4,009,134	Locally funded project
MU-83	N	NA			Multi-use greenway trail	**$5,014,016**	$5,014,016	Locally funded project
MU-84	N	NA			Multi-use greenway trail	**$2,917,230**	$2,917,230	Locally funded project
						$ 36,747,218	$36,747,218	

Intersections

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
I-51	N	NA	Jodeco road @ Oak Grove Road	Jodeco road @ Oak Grove Road	Could be addressed by new jodeco road widening. Signal.	**$ 220,000**	$ 220,000	Locally funded project
I-52	N	NA	Jodeco Road @ Dailey Mill Road	Jodeco Road @ Dailey Mill Road	Addressed by new jodeco road widening. Signal.	**$ 220,000**	$ 220,000	Locally funded project
I-80	N	NA	SR 81 @ Old Hwy 3	SR 81 @ Old Hwy 3	Realign beginning at Mt Carmel.	**$ 500,000**	$ 500,000	Locally funded project
I-91	N	NA	SR 20 @ Westridge Industrial Blvd	SR 20 @ Westridge Industrial Blvd	Singalize intersection. A 2 lefts and 2 rights	**$ 1,888,500**	$ 1,888,500	Locally funded project
I-111	N	NA	Bill Gardner Pkwy @ SR 42	Bill Gardner Pkwy @ SR 42	Corridor capacity issue. Adtnl crossing @ Price	**$ 500,000**	$ 500,000	Locally funded project
I-112	N	NA	Grove Road @ SR 42	Grove Road @ SR 42	Realign Grove. Ad NB right-turn SB left-turn	**$ 1,344,250**	$ 1,344,250	Locally funded project
I-113	N	NA	Peeksville Road @ Jackson St	Peeksville Road @ Jackson St	Add signal coordinated with Peeksvill @ 42 sig	**$ 220,000**	$ 220,000	Locally funded project
I-128	N	NA	Bill gardner Pkwy @ Tanger Blvd	Bill gardner Pkwy @ Tanger Blvd	Add additional EB right-turn lane	**$ 1,903,000**	$ 1,903,000	Locally funded project
I-137	N	NA	SR 138 @ Walter Way	SR 138 @ Walter Way	Queueing from intersection to the east. Dual left	**$ 600,000**	$ 600,000	Locally funded project
						$ 7,395,750	$ 7,395,750	

Total Mid Range Cost	**$ 381,699,143**	$ 272,077,183
Available Mid Range Funding	**$ 382,200,000**	$ 268,000,000
Balance	**$ 500,857**	$ (4,077,183)

Long Range 2031 - 2040

Widening

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
R-36	No		SR 20/SR 81 WIDENING	FROM DOWNTOWN MCDONOUGH TO PHILIPS DRIVE	Primary Congestion Corridor/ Adding 1 lane in each direction	**$ 38,075,871**	$ 7,615,174	Project not yet funded. 20% local funding 80% federal and/or state. Coordination with GDOT needed to move project forward
R-39	No	NA	SR 155 WIDENING	FROM DOWNTOWN MCDONOUGH TO SR 42/US 23	Primary Congestion Corridor/ Adding 1 lane in each direction with complete street features. New school complex scheduled to be built near post office between 2019 and 2024.	**$ 26,254,999**	$ 13,127,500	Project not yet funded. 50% local funding 50% federal and/or state. Coordination with GDOT needed to move project forward
R-50	No	NA	WALT STEPHENS ROAD	BETWEEN BLACKHALL ROAD AND ROCK QUARRY ROAD	Secondary Congestion Corridor/ Adding 1 lane in each direction	**$ 54,745,008**	$ 54,745,008	Locally funded project
R-51 (A)	No	NA	FLIPPEN ROAD	BETWEEN SR 138 AND WALT STEPHENS RD	Connectivity/ Secondary Congestion Corridor/ Adding 1 lane in each direction	**$ 25,436,135**	$ 25,436,135	Locally funded project
R-13	No	NA	PATRICK HENRY PARKWAY: SEGMENT 2 - WIDENING	FROM JODECO ROAD TO EAGLES LANDING PARKWAY	Adding 1 lane in each direction	**$ 12,700,000**	$ 12,700,000	Locally funded project
R-34 (B)	No	NA	SR 81 WIDENING	FROM N BETHANY ROAD TO HENRY COUNTY- NEWTON COUNTY BORDER	Primary Congestion Corridor/ Adding 1 lane in each direction	**$ 84,318,291**	$ 42,159,146	Project not yet funded. 50% local funding 50% federal and/or state. Coordination with GDOT needed to move project forward
R-20	No	NA	EAGLES LANDING PARKWAY WIDENING	FROM EAGLES POINTE PARKWAY TO US 23	Adding 1 lane in each direction	**$ 19,000,000**	$ 19,000,000	Locally funded project
R-35	No	NA	JONESBORO ROAD WIDENING	FROM I-75 TO DORIS STREET (DOWNTOWN MCDONOUGH)	Primary Congestion Corridor/ Adding 1 lane in each direction	**$ 67,658,436**	$ 13,531,687	Project not yet funded. 20% local funding 80% federal and/or state. Coordination with GDOT needed to move project forward
R-74	No	NA	SR 42	BETWEEN BILL GARDNER PKWY AND LG GRIFFIN ROAD	Primary Congestion Corridor / Adding 1 lane in each direction	**$ 23,293,930**	$ 4,658,786	Project not yet funded. 20% local funding 80% federal and/or state. Coordination with GDOT needed to move project forward
						$ 351,482,670	$ 192,973,435	

New Road

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
R-62 (B)	No	NA	CAMPGROUND ROAD EXTENSION	BETWEEN ELLIOT ROAD AND AIRLINE RD	Connectivity - New two lane roadway	**$ 20,487,990**	$ 20,487,990	Locally funded project
R-26	NO		MCDONOUGH PKWY EXTENSION (MCDONOUGH BYPASS): PHASE IV - NEW ALIGNMENT	FROM SR 20 (LAWRENCEVILLE STREET) TO SR 81 (KEYS FERRY ROAD)	New 4 lane roadway	**$ 25,000,000**	$ 25,000,000	Locally funded project
R-51 (C)	No	NA	FLIPPEN ROAD EXTENSION	BETWEEN STRATFORD CIRCLE AND JONESBORO ROAD	Connectivity - New two or four lane roadway extending the Flippen Rd corridor south to N Mt Carmel Rd	**$ 28,425,425**	$ 28,425,425	Locally funded project
R-71	No	NA	I-75 COLLECTOR DISTRIBUTOR LANES	BETWEEN EAGLES LANDING PARKWAY AND SR 155	New C-D system with 2 lanes in each direction. Barrier separated from mainline interstate. Access points only at current interchanges. Project will facilitate local interchange to interchange trips.	**$ 5,000,000**	$ 5,000,000	Contribution to C-D system. Full project cost in the unconstrained list
						$ 78,913,415	$ 73,913,415	

Arterial Upgrades

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
R-29	No	NA	FAIRVIEW ROAD OPERATIONAL IMPROVEMENTS	FROM SWAN LAKE ROAD TO SR 155 (HENRY COUNTY - ROCKDALE COUNTY BORDER)	Adding Center Turn Lane	**$ 8,000,000**	$ 8,000,000	Locally funded project
R-65 (A)	No	NA	BRIDGES ROAD	FROM WILLOW LANE TO SR 20	Operations and Safety changes along corridor and realign intersection - Simpson @ Bridges	**$ 105,172**	$ 105,172	Locally funded project
R-42	No	NA	HARRIS DRIVE	BETWEEN SR 42 AND S BETHANY ROAD	Secondary Congestion Corridor	**$ 75,629**	$ 75,629	Locally funded project
R-70	No	NA	MILL ROAD	BETWEEN MT.CARMEL ROAD AND SR 81	Connectivity	**$ 63,074**	$ 63,074	Locally funded project
R-60	No	NA	OLD JACKSON ROAD	BETWEEN SR 81 AND PEEKSVILLE ROAD	Connectivity	**$ 297,971**	$ 297,971	Locally funded project
R-40 (C)	No	NA	HONEY CREEK ROAD - SNAPPING SHOALS ROAD	FROM N OLA ROAD TO SR 81	Secondary Congestion Corridor	**$ 214,589**	$ 214,589	Locally funded project
R-40 (B)	No	NA	TURNER CHURCH ROAD	BETWEEN AIRLINE ROAD AND N OLA ROAD	Connectivity	**$ 201,823**	$ 201,823	Locally funded project
R-62 (A)	No	NA	CAMPGROUND ROAD	BETWEEN BRANNON RD AND ELLIOT ROAD	Connectivity	**$ 141,906**	$ 141,906	Locally funded project
R-69 (B)	No	NA	NORTH-SOUTH CONNECTION BETWEEN JODECO ROAD AND SR 81	ON MT CARMEL BETWEEN BUTCHTOWN ROAD AND SR 82	Connectivity	**$ 100,111**	$ 100,111	Locally funded project
R-69 (C)	No	NA	NORTH-SOUTH CONNECTION BETWEEN JODECO ROAD AND SR 81	BETWEEN JODECO ROAD AND JONESBORO RD	Connectivity	**$ 68,402**	$ 68,402	Locally funded project
R-40 (A)	No	NA	TURNER CHURCH ROAD	BETWEEN CONYERS ROAD AND AIRLINE ROAD	Secondary Congestion Corridor	**$ 65,905**	$ 65,905	Locally funded project
R-63	No	NA	SELFRIDGE ROAD	BETWEEN SR 155 AND AIRLINE ROAD	Connectivity	**$ 145,373**	$ 145,373	Locally funded project
R-59	No	NA	STROUD ROAD-PEEKSVILLE ROAD	BETWEEN SR 81 AND SR 42	Connectivity	**$ 683,776**	$ 683,776	Locally funded project
						$ 10,163,731	$ 10,163,731	

Sidewalks

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
	No	**NA**	**Sidwalk Program**	**Countywide**	**Sidewalk program to be funded at $5 million per year.**	**$ 50,000,000**	**$ 50,000,000**	
BP-152	No	NA	Campground Road	Between SR 42 and Turner Circle		**$ 1,828,029**	$ 1,828,029	Locally funded project
BP-153	No	NA	Brannan Road	Between Sprayberry Lane and Campground Road		**$ 742,255**	$ 742,255	Locally funded project
BP-154	No	NA	SR 155	Between E Lake Road and Turner Church Road		**$ 2,288,409**	$ 2,288,409	Locally funded project
BP-207	No	NA	SR 81	Between Old Highway 3 and David Road		**$ 684,099**	$ 684,099	Locally funded project
BP-210	No	NA	Steele Drive	Between Steele Ct and Oak Street		**$ 1,986,974**	$ 1,986,974	Locally funded project
BP-212	No	NA	Amah Lee Road	Between Lake Amah Lee Road and W Main Street		**$ 1,087,590**	$ 1,087,590	Locally funded project
BP-217	No	NA	Eagles Landing Parkway	Between Talon Pl and Crown Corners Drive		**$ 2,808,563**	$ 2,808,563	Locally funded project

BP-162	No	NA	SR 20	Between W Asbury Road and Bridges Road		$	**1,147,211**	$ 1,147,211	Locally funded project
BP-192	No	NA	Industrial Blvd	Between SR 20 and SR 155		$	**1,704,188**	$ 1,704,188	Locally funded project
BP-129	No	NA	Shields Road	Between Davis Road and SR 42		$	**829,717**	$ 829,717	Locally funded project
BP-130	No	NA	Pinehurst Drive	Between Valley Drive and SR 42		$	**788,331**	$ 788,331	Locally funded project
BP-132	No	NA	SR 138	Between SR 42 and Flat Rock Road		$	**959,821**	$ 959,821	Locally funded project
BP-139	No	NA	Red Oak Road	Between Flippen Road and Rock Quarry Road		$	**1,060,713**	$ 1,060,713	Locally funded project
BP-140	No	NA	Tye Street	Between Red Oak Road and Banks Road		$	**301,409**	$ 301,409	Locally funded project
BP-142	No	NA	Rock Quarry Road	Between SR 42 and Piedmont Henry Hospital		$	**2,287,218**	$ 2,287,218	Locally funded project
BP-161	No	NA	Willow Lane	Between Bridges Road and SR 20		$	**1,100,300**	$ 1,100,300	Locally funded project
BP-163	No	NA	Dailey Mill Road	Between Wimbley Drive and Jonesboro Road		$	**721,249**	$ 721,249	Locally funded project
BP-164	No	NA	Ivey Edwards Lane	Between Dailey Mill Road and SR 42		$	**903,030**	$ 903,030	Locally funded project
BP-166	No	NA	SR 42	Between Spring Creek Blvd and Woodruff Street		$	**199,574**	$ 199,574	Locally funded project
BP-175	No	NA	Racetrack Drive	Between Towne Park Drive and Iris Lake Road		$	**279,247**	$ 279,247	Locally funded project
BP-177	No	NA	McDonough Parkway	Between Bridges Road and SR 20		$	**522,171**	$ 522,171	Locally funded project
BP-178	No	NA	Henry Parkway	Between SR 20 and SR 155		$	**1,256,776**	$ 1,256,776	Locally funded project
BP-179	No	NA	Philips Drive	Between SR 81 and Head Lane		$	**316,540**	$ 316,540	Locally funded project
BP-196	No	NA	Tanger Blvd	Between Bill Gardner Parkway and Tanger Drive		$	**144,103**	$ 144,103	Locally funded project
BP-197	No	NA	Frances Ward Drive	Between Bill Gardner Parkway and Indian Creek Road		$	**568,663**	$ 568,663	Locally funded project
BP-198	No	NA	Indian Creek Road	Between Frances Ward Drive and I-75		$	**1,169,811**	$ 1,169,811	Locally funded project
BP-219	No	NA	Racetrack Road	Between Home Towne Drive and Cedar Road		$	**244,362**	$ 244,362	Locally funded project
BP-148	No	NA	McCullough Road	Between Kerrie Lane and Chambers Road		$	**1,258,851**	$ 1,258,851	Locally funded project
BP-188	No	NA	SR 81	Between SR 20 and Mill Road		$	**1,437,482**	$ 1,437,482	Locally funded project
BP-189	No	NA	Nail Drive	Between SR 81 and Nail Road		$	**822,167**	$ 822,167	Locally funded project
BP-221	No	NA	Nail Road	Between Nail Drive and SR 20		$	**312,836**	$ 312,836	Locally funded project
BP-106	No	NA	West Panola Road	Between Henry County-Clayton County Border and Fairview Road		$	**1,074,021**	$ 1,074,021	Locally funded project
BP-110	No	NA	Panola Road	Between Flakesmill Road and Scarborough Road		$	**1,183,271**	$ 1,183,271	Locally funded project
BP-111	No	NA	Scarborough Road	Between Panola Road and Hearn Road		$	**1,600,022**	$ 1,600,022	Locally funded project
BP-113	No	NA	Hearn Road	Between Austin Road and Fairview Road		$	**1,127,759**	$ 1,127,759	Locally funded project
BP-123	No	NA	Old Conyers Road	Between Cotton Indian Elementary School and Clary Drive		$	**207,220**	$ 207,220	Locally funded project
BP-125	No	NA	SR 42	Between Old Macon Highway and SR 138		$	**1,155,668**	$ 1,155,668	Locally funded project
BP-126	No	NA	Valley Hill Road	Between SR 42 and E Atlanta Road		$	**1,748,400**	$ 1,748,400	Locally funded project
BP-133	No	NA	Millers Mill Road	Between SR 138 and Lakepointe Ct		$	**973,043**	$ 973,043	Locally funded project
BP-136	No	NA	SR 138	Between SR-138/I-75 Interchange and Mt.Zion Road		$	**162,894**	$ 162,894	Locally funded project
BP-145	No	NA	Noah's Ark Road	Between Jodeco Road and Ridgewood Trail		$	**352,184**	$ 352,184	Locally funded project
BP-156	No	NA	Jonesboro Road	Between Jonesboro road/I-75 Interchange and N Bridges Road		$	**394,057**	$ 394,057	Locally funded project
BP-168	No	NA	Turner Church Road	Between SR 155 and SR 20		$	**1,204,428**	$ 1,204,428	Locally funded project
BP-169	No	NA	SR 20	Between Turner Church Road and McGarity Road		$	**1,266,434**	$ 1,266,434	Locally funded project
BP-171	No	NA	Airline Road	Between Deer Ridge Ct and Rodgers Road		$	**1,556,425**	$ 1,556,425	Locally funded project
BP-172	No	NA	Lake Dow Road	Between SR 81 and McGarity Drive		$	**2,962,809**	$ 2,962,809	Locally funded project
BP-180	No	NA	SR 42	Between Griffin Street and Wise Road		$	**1,242,408**	$ 1,242,408	Locally funded project
						$	**49,972,732**	$ 49,972,732	

Greenway Trails

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
MU-88	No	NA	NA			**$7,662,212**	$7,662,212	Locally funded project
MU-96	No	NA	NA			**$3,655,148**	$3,655,148	Locally funded project
MU-99	No	NA	NA			**$1,097,000**	$1,097,000	Locally funded project
MU-100	No	NA	NA			**$12,591,884**	$12,591,884	Locally funded project
MU-102	No	NA	NA			**$4,814,606**	$4,814,606	Locally funded project
MU-74	No	NA	NA			**$4,021,038**	$4,021,038	Locally funded project
MU-80	No	NA	NA			**$2,386,278**	$2,386,278	Locally funded project
MU-92	No	NA	NA			**$2,645,041**	$2,645,041	Locally funded project
MU-93	No	NA	NA			**$4,101,227**	$4,101,227	Locally funded project
MU-103	No	NA	NA			**$3,160,661**	$3,160,661	Locally funded project
MU-101	No	NA	NA			**$16,870,898**	$16,870,898	Locally funded project
MU-66	No	NA	NA			**$2,989,434**	$2,989,434	Locally funded project
MU-69	No	NA	NA			**$4,685,028**	$4,685,028	Locally funded project
						$70,680,455	$70,680,455	

Intersections

Project Code	TIP	ARC ID	Name	Extent	Description	Project Cost	County Funding	Notes
I-4	No	NA	Rex Road @ E Atlanta Road	Rex Road @ E Atlanta Road	Add traffic signal	$ **220,000**	$ 220,000	Locally funded project
I-57	No	NA	Jonesboro Road @ Chambers Road	Jonesboro Road @ Chambers Road	EB, WB Right-Turns. Intersection part of R-10/R-49	$ **1,234,200**	$ 1,234,200	Locally funded project
I-58	No	NA	Jonesboro Road @ Mt Olive Road	Jonesboro Road @ Mt Olive Road	Signal. SB Right-turn, SB left-turn	$ **1,365,600**	$ 1,365,600	Locally funded project
I-95	No	NA	Woolsey Road @ Old Griffin Road	Woolsey Road @ Old Griffin Road	Low volume intersection. Roundabout.	$ **2,434,900**	$ 2,434,900	Locally funded project
I-100	No	NA	Hampton Locust Grove Road @ Walker Drive	Hampton Locust Grove Road @ Walker Drive	EB left-turn and WB right turn.	$ **1,013,100**	$ 1,013,100	Locally funded project
I-101	No	NA	Hampton Locust Grove Road @ Strickland Road	Hampton Locust Grove Road @ Strickland Road	EB left-turn	$ **396,000**	$ 396,000	Locally funded project
I-109	No	NA	Trestle Road @ SR 155	Trestle Road @ SR 155	Realign Trestle. Low priority. Dirt roads.	$ **500,000**	$ 500,000	Locally funded project
I-119	No	NA	Peeksville Road @ Old Jackson Road	Peeksville Road @ Old Jackson Road	Realign using existing dirt roadbed	$ **500,000**	$ 500,000	Locally funded project

I-129	No	NA	Jodeco Road @ Oak Leaf Drive	Jodeco Road @ Oak Leaf Drive	Extend WB Left-turn lane to from 190' to 400'	**$ 1,499,349**	$ 1,499,349	Locally funded project
I-135	No	NA	Jodeco Road @ Hudson Bridge Road	Jodeco Road @ Hudson Bridge Road	Add dual WB right turn lane	**$ 464,500**	$ 464,500	Locally funded project
I-136	No	NA	Elm Street @ Bridgemill Drive	Elm Street @ Bridgemill Drive	Restripe intersection to show NB left and SB right	**$ 10,000**	$ 10,000	Locally funded project
I-142	No	NA	SR 138 @ Holiday Inn Drive	SR 138 @ Holiday Inn Drive	Convert to right-in right-out driveway	**$ 50,000**	$ 50,000	Locally funded project
I-152	No	NA	Panola Road @ SR 155	Panola Road @ SR 155	Signal	**$ 200,000**	$ 200,000	Locally funded project
I-155	No	NA	Colvin Road @ SR 42	Colvin Road @ SR 42	SB Left Turn Lane	**$ 330,000**	$ 330,000	Locally funded project
I-160	No	NA	Price Drive @ SR 42	Price Drive @ SR 42	Signal	**$ 200,000**	$ 200,000	Locally funded project
						$10,417,649	$ 10,417,649	

Total Phase Cost	**$ 571,630,652**	$ 408,121,417
Available Phase Funding	**$ 578,200,000**	$ 409,000,000
Balance	**$ 6,569,348**	$ 878,583

Unconstrained (Projects beyond 2040)

Widening

Project Code	TIP	ARC ID	Name	Extent	Description	Total	County Funding	Notes
R-32	No		SR 155 WIDENING	FROM SR 138 TO DOWNTOWN MCDONOUGH	Primary Congestion Corridor/ Adding 1 lane in each direction	$ 104,734,637		
R-33	No		SR 20 WIDENING	FROM DOWNTOWN MCDONOUGH TO HENRY COUNTY-ROCKDALE COUNTY BORDER	Primary Congestion Corridor/ Adding 1 lane in each direction	$ 92,585,498		
R-56 (A)	No		JODECO ROAD/HUDSON BRIDGE ROAD	BETWEEN JODECO RD AND ROCK QUARRY ROAD	Primary Congestion Corridor / Adding 1 lane in each direction	$ 96,733,476		
R-31	No		SR 138 WIDENING	FROM DAVIS ROAD TO MILLERS MILL ROAD	Primary Congestion Corridor/ Adding 1 lane in each direction	$ 101,248,248		
R-51 (B)	No		FLIPPEN ROAD WIDENING	BETWEEN WALT STEPHENS ROAD AND STRATFORD CIRCLE	Connectivity/ Secondary Congestion Corridor/ Adding 1 lane in each direction	$ 80,108,751		
R-41 (B)	No		KING MILL ROAD WIDENING	SR 42/US 23AND OLD JACKSON ROAD/SR 81	Secondary Congestion Corridor/ Adding 1 lane in each direction	$ 69,366,336		
R-44	No		LOCUST GROVE GRIFFIN ROAD WIDENING	BETWEEN HOSANNAH ROAD AND SR 42	Secondary Congestion Corridor/ Adding 1 lane in each direction	$ 45,423,428		
R-45 (A)	No		AIRLINE ROAD WIDNEING	BETWEEN OGLESBY BRIDGE ROAD SW AND SR 20	Secondary Congestion Corridor - Adding one lane in each direction to accomdate future traffic volumes	$ 76,404,778		
R-45 (B)	No		AIRLINE ROAD WIDNEING	BETWEEN SR 20 AND RODGERS ROAD	Connectivity - Adding one lane in each direction to accomdate future traffic volume	$ 55,576,327		
R-43	No		BETHLEHEM ROAD WIDENING	BETWEEN SR 42 AND GREENWOOD ROAD	Secondary Congestion Corridor/ Adding 1 lane in each direction	$ 46,464,392		
R-19B	No		HAMPTON-LOCUST GROVE ROAD WIDENING	BETWEEN SR 155 AND SR 20 IN HAMPTON	Adding 1 land in each direction	$ -		
R-19 A	No		BILL GARDNER PARKWAY WIDENING	AT SR 155 TO LESTER MILL ROAD (4 LANES) AND FROM LESTER MILL ROAD TO I-75 SOUTH (6 LANES)	Adding 1 lane (or) 2 lanes in each direction	$ 18,000,000		
						$ 786,645,871		

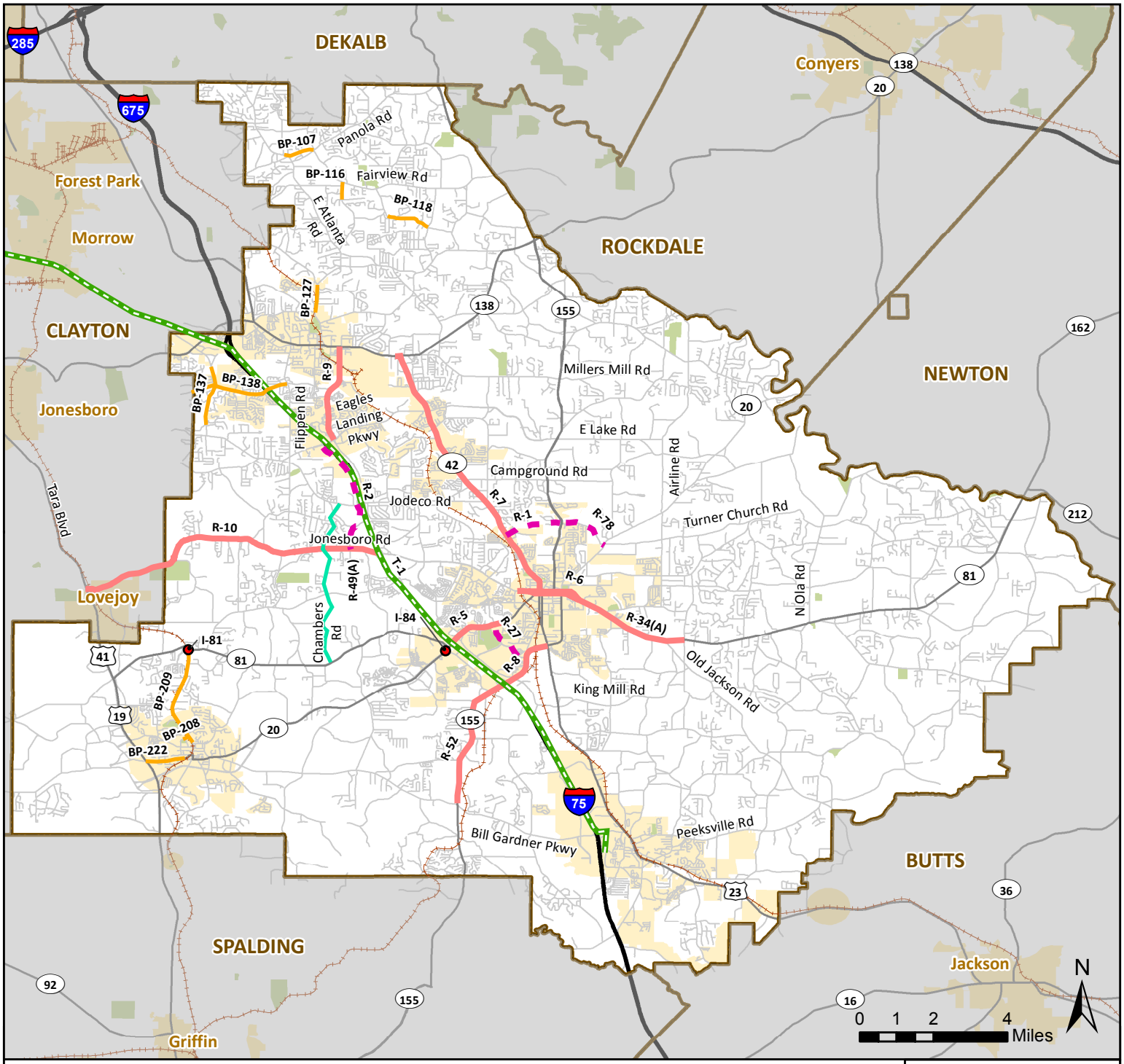
New Road

Project Code	TIP		Name	Extent	Description	Total	County Funding	Notes
R-71	No		I-75 COLLECTOR DISTRIBUTOR LANES	BETWEEN EAGLES LANDING PARKWAY AND SR 155	New C-D system with 2 lanes in each direction. Barrier separated from mainline interstate. Access points only at current interchanges. Project will facilitate local interchange to interchange trips.	$ 839,187,452		
R-25	No		MCDONOUGH PARKWAY EXTENSION (MCDONOUGH BYPASS): PHASE II - NEW ALIGNMENT	FROM SR 155 (DECATUR ROAD) TO SR 20 (CONYERS HIGHWAY / LAWRENCEVILLE STREET)	Add one lane in each direction	$ 5,700,000		
R-1	No		MCDONOUGH PARKWAY EXTENSION (MCDONOUGH BYPASS): PHASE II - NEW ALIGNMENT	FROM US 23 (ATLANTA STREET) TO SR 155 (DECATUR ROAD)	Add one lane in each direction	$ 5,700,000		
R-75	No		AVALON CONNECTOR	BETWEEN HENRY PKWY AND INDUSTRIAL PKWY	Connectivity - New four lane divided roadway crossing I-75 connecting Henry Pkwy and Avalon Pkwy at the intersection of Industrial Pkwy	$ 31,513,277		
R-51 (C)	No		FLIPPEN ROAD EXTENSION	BETWEEN STRATFORD CIRCLE AND JONESBORO ROAD	Connectivity - New two or four lane roadway extending the Flippen Rd corridor south to N Mt Carmel Rd	$ 28,425,425		
R-51 (E)	No		N MT CARMEL - S MT CARMEL CONNECTOR	BETWEEN DRIVEWAY SOUTH OF BISCAYNE TERRACE DRIVE AND MT.CARMEL ROAD	Connectivity - Major intersection realignment resulting in the connection of N Mt Carmel Rd and S Mt Carmel Road	$ 6,046,749		
R-49 (B)	No		CHAMBERS -SIMPSON MILL CONNECTOR	BETWEEN SR 81 AND SR 20	Connectivity - New two lane roadway connecting Chambers Road and Simpson Mill Road	$ 31,087,271		
R-69 (A)	No		DUTCHTOWN ROAD EXTENTSION	BETWEEN JONESBORO ROAD AND JODECO ROAD	Connectivity - New two lane road connecting Jonesoboro Road and Jodeco Road	$ -		
R-76	No		PATRICK HENRY PKWY CONNECTOR	BETWEEN PATRICK HENRY PKWY AND WESTERN HENRY PKWY	Connectivity - New two lane crossing of I-75. Project is associated with R-2.	$ 18,943,949		

R-51 (G)	No		ROCKY CREEK CONNECTOR	BETWEEN SR 20 AND ROCKY CREEK ROAD	Connectivity - New two lane extension of New Morn Dr utilizing Manley Dr to connect with Rocky Creek Rd	$ 24,234,663		
						$ 990,838,786		
Arterial Upgrades								
Project Code	**TIP**		**Name**	**Extent**	**Description**	**Total**	**County Funding**	**Notes**
R-53	No		PANOLA ROAD OPERATIONAL IMPROVEMENTS	BETWEEN AUSTIN ROAD AND FLAKESMILL ROAD	Adding center turn lane	$ 14,421,516		
R-21	No		FAIRVIEW ROAD: PHASE II - OPERATIONAL IMPROVEMENTS	FROM PANOLA ROAD TO SWAN LAKE ROAD	Adding center turn lane	$ 105,000,000		
R-22	No		FAIRVIEW ROAD: PHASE III - OPERATIONAL IMPROVEMENTS	FROM DEKALB COUNTY LINE TO ANVIL BLOCK ROAD	Adding center turn lane	$ 5,300,000		
R-51 (D)	No		N MT.CARMEL ROAD	BETWEEN JONESBORO ROAD AND SOUTH OF BISCAYNE TERRACE DRIVE	Connectivity	$ 72,854		
R-49 (C)	No		SIMPSON MILL ROAD	BETWEEN SR 20 AND HAMPTON LOCUST GROVE ROAD	Connectivity	$ 120,940		
R-61 (B)	No		JOHN WILLIAMS PARKWAY-COAN DRIVE	BETWEEN RABBIT RUN AND OLD JACKSON ROAD	Connectivity	$ 148,362		
R-51 (F)	No		S MT CARMEL ROAD - NEW MORN DRIVE	BETWEEN MT CARMEL ROAD AND SR 20	Connectivity	$ 177,645		
R-61 (A)	No		JOHN WILLIAMS PARKWAY-COAN DRIVE	BETWEEN IRIS LAKE ROAD AND RABBIT RUN	Connectivity	$ 100,360		
R-51 (H)	No		ROCKY CREEK ROAD	BETWEEN ROCKY CREEK CONNECTOR AND HENRY COUNTY - SPALDING COUNTY BORDER	Connectivity	$ 197,765		
R-73 (C)	No		N OLA ROAD - S OLA ROAD - SINGLEY DRIVE	BETWEEN S OLA RD AND SR 43	Connectivity	$ 215,832		
R-62 (C)	No		HARPER ROAD	BETWEEN SR 20 AND N OLA ROAD	Connectivity	$ 132,392		
R-73 (A)	No		N OLA ROAD - S OLA ROAD - SINGLEY DRIVE	BETWEEN TURNER CHURCH RD AND SR 81	Connectivity	$ 286,171		
R-73 (B)	No		N OLA ROAD - S OLA ROAD - SINGLEY DRIVE	BETWEEN SR 81 AND S OLA RD	Connectivity	$ 251,460		
						$ 126,425,297		
Sidewalks								
Project Code	**TIP**		**Name**	**Extent**	**Description**	**Total**	**County Funding**	**Notes**
BP-205	4.65		Club Drive	Between SR 42 and Peeksville Road		$ 474,507		
BP-218	4.65		Racetrack Road	Between Iris Lake Road and SR 81		$ 661,232		
BP-224	4.65		E Main Street	Between Rosenwald Drive and Macbeth Drive		$ 734,471		
BP-157	4		N Mt.Carmel Road	Between Jonesboro Road and Mt.Carmel Road		$ 1,187,347		
BP-195	4		Iris Lake Road	Between Iris Lakes and Harris Drive		$ 954,484		
BP-131	3.65		SR 42	Between Neal Boulevard and Eagles Landing Parkway		$ 2,699,288		
BP-158	3.65		Mill Road	Between Jonesboro Road and Mt.Carmel Road		$ 1,071,352		
BP-182	3.65		SR 155	Between SR-155/I-75 Interchange and Walker Drive		$ 2,309,245		
BP-216	3.65		Patrick Henry Parkway	Between Eagles Landing Parkway and Jodeco Road		$ 1,809,366		
BP-147	3.4		Chambers Road	Between Jodeco Road and Jonesboro Road		$ 1,540,139		
BP-149	3.4		Flippen Road	Between Jodeco Road and Stratford Circle		$ 2,198,322		
BP-174	3.4		Upchurch Road	Between Darwish Drive and Eddie Craig Drive		$ 704,431		
BP-194	3.4		Harris Drive	Between SR 42 and Davis Lake Road		$ 1,009,668		
BP-121	3.4		SR 155	Between SR 138 and White Drive		$ 1,049,009		
BP-186	2.4		SR 155	Between Luella Road and Henry County-Spalding County Border		$ 1,312,043		
BP-191	2.4		Simpson Mill Road	Between SR 20 and Pullin Road		$ 698,445		
BP-193	2.4		SR 42	Between John Williams Parkway and Harris Drive		$ 729,843		
BP-226	2.4		McDonough St/McDonough-Hampton Road	Between Shelby Street and SR 20		$ 763,299		
BP-183	1.4		Walker Drive	Between SR 155 and Strickland Road		$ 1,910,185		
BP-184	1.4		Strickland Road	Between Walker Drive and Hampton Locust Grove Road		$ 294,173		
BP-185	1.4		Hampton Locust Grove Road	Between Strickland Road and Wyckliffe Drive		$ 1,260,367		
BP-187	1.4		Greenwood Industrial Parkway	Between SR 155 and Bethlehem Road		$ 1,982,242		
BP-206	1.4		Hampton Locust Grove Road	Between McDonough Street and SR 20		$ 632,437		
BP-220	1.4		N Ola Road	Between Wilson Drive and SR 81		$ 1,048,534		
BP-225	1.4		E King Road/ Floyd Road	Between McDonough Street and Watercourse Way		$ 709,736		
						$ 29,744,165		
Greenway Trails								
Project Code	**TIP**		**Name**	**Extent**	**Description**	**Total**	**County Funding**	**Notes**
MU-73	5.3					$7,826,218		
MU-77	5.3					$3,131,942		

MU-87	5.3					$69,707		
MU-104	5.3					$19,403,997		
MU-68	5					$8,410,265		
MU-78	5					$13,902,888		
MU-97	4.6					$4,059,400		
MU-71	4.1					$369,581		
MU-75	3.8					$5,035,009		
MU-94	3.8					$3,156,753		
MU-90	3.1					$5,060,036		
MU-81	2.6					$2,216,592		
MU-85	2.6					$1,461,266		
MU-89	2.6					$3,139,797		
MU-95	2.6					$2,875,408		
MU-76	1.4					$79,339		
MU-79	1.4					$5,162,443		
MU-86	1.4					$77,356		
MU-91	1.4					$3,487,379		
MU-98	1.4					$1,387,826		
						$90,313,202		
Intersections								
Project Code	**TIP**		**Name**	**Extent**	**Description**	**Total**	**County Funding**	**Notes**
I-9	-		Flakes Road @ Flat Rock Road	Flakes Road @ Flat Rock Road	Realignment - remove skew, perpendicular four way	$500,000		
I-10	-		Old conyers Rd @ SR 138	Old conyers Rd @ SR 138	Northbound left-turn lane on SR 138	$ 330,000		
I-14	-		SR 138 @ US 23	SR 138 @ US 23	Traffic/Synchro analysis of intersection- EB Left	$ 330,000		
I-15	-		Shepherd Drive (Near) @ US 23	Shepherd Drive (Near) @ US 23	Add traffic signal	$ 200,000		
I-16	-		SR 138 @ Flippen Road	SR 138 @ Flippen Road	Eastbound right-turn lane	$ 514,250		
I-17	-		Old Atlanta Road @ Flippen Road	Old Atlanta Road @ Flippen Road	NB Left-turn, SB Right-Turn	$ 1,013,100		
I-20	-		SR 138 @ SR 42	SR 138 @ SR 42	Dual NB left-turn, addressed by R-30, R-7	$ -		
I-25	-		Hemphill Road @ SR 155	Hemphill Road @ SR 155	Realign, signal study	$ 200,000		
I-44	-		McCullough Road @ Flippen Road	McCullough Road @ Flippen Road	Signal. Part of R-51B widening	$ 220,000		
I-72	-		Ivey edwards lane @ SR 42	Ivey edwards lane @ SR 42	Close Ivey Edwards and close RR crossing	$ -		
I-76	-		Lawrenceville St @ Conyers Road	Lawrenceville St @ Conyers Road	Realignment both Lawrenceville and Fairview.	$ 500,000		
I-78	-		Mt Carmel Road @ Chambers Road	Mt Carmel Road @ Chambers Road	Roundabout	$ 2,434,900		
I-79	-		Mt Carmel Road @ Mill Road	Mt Carmel Road @ Mill Road	SLOST Project - Roundabout	$ 1,184,900		
I-82	-		SR 81 @ Mill Road	SR 81 @ Mill Road	SPLOST - Signalize to allow SB left-turn	$ 200,000		
I-85	-		SR 20 @ Old Industrial Blvd	SR 20 @ Old Industrial Blvd	Add WB left on Old Industrial. R-5 to handle	$ -		
I-102	-		Greenwood Industrial Pkwy @ N McDonough Road	Greenwood Industrial Pkwy @ N McDonough Road	Addtional SB left storage, signal, better radii	$ 1,229,800		
I-117	-		Leguin Mill Road @ Old Jackson Road	Leguin Mill Road @ Old Jackson Road	roundabout	$ 2,434,900		
I-118	-		Old Jackson Road @ S Ola Road	Old Jackson Road @ S Ola Road	double roundabouts	$ 927,000		
I-150	-		McGarity Road @ SR 20	McGarity Road @ SR 20	Realignment with I-76	$ 100,000		
I-151	-		Sims Street @ Turner Street	Sims Street @ Turner Street	Part of R-32	$ 400,000		
I-154	-		Tye Road @ Hwy 138	Tye Road @ Hwy 138	Signal	$ 220,000		
I-156	-		Bethlehem Road @ SR 42	Bethlehem Road @ SR 42	WB right acceleration lane	$ -		
						$ 12,938,850		

Total Phase Cost	**$**	**2,036,906,171**
Available Phase Funding	**$**	**-**
Balance	**$**	**(2,036,906,171)**



Recommended Action Plan Projects

Henry County Joint Comprehensive Transportation Plan Update

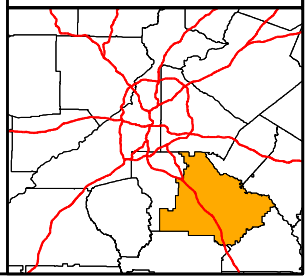
Project Type

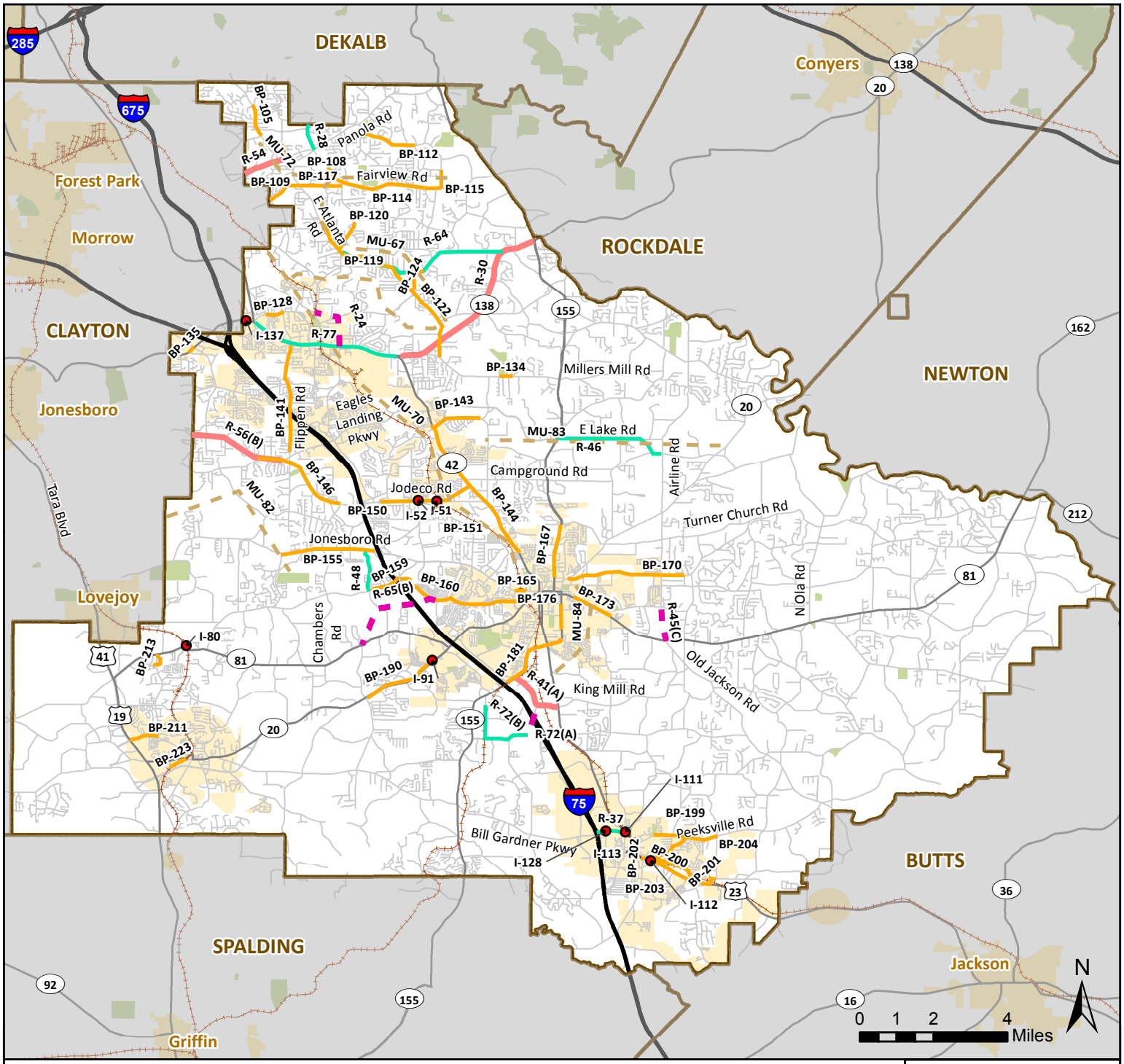
- Greenway Trails
- Sidewalks
- Roadway Widenings
- New Roadways
- Arterial Upgrades
- Transit
- Intersections

- Park/Recreation Area
- Cities
- Counties
- Interstates
- US and State Routes
- Streets
- Railroads

Sources: Henry County, Study Team

OUR FUTURE IN MOTION
JOINT HENRY COUNTY/CITIES TRANSPORTATION PLAN





Recommended Mid Range Projects

Henry County Joint Comprehensive Transportation Plan Update

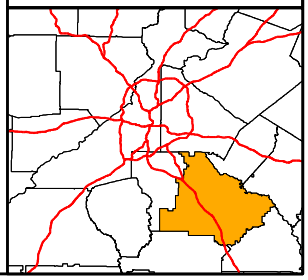
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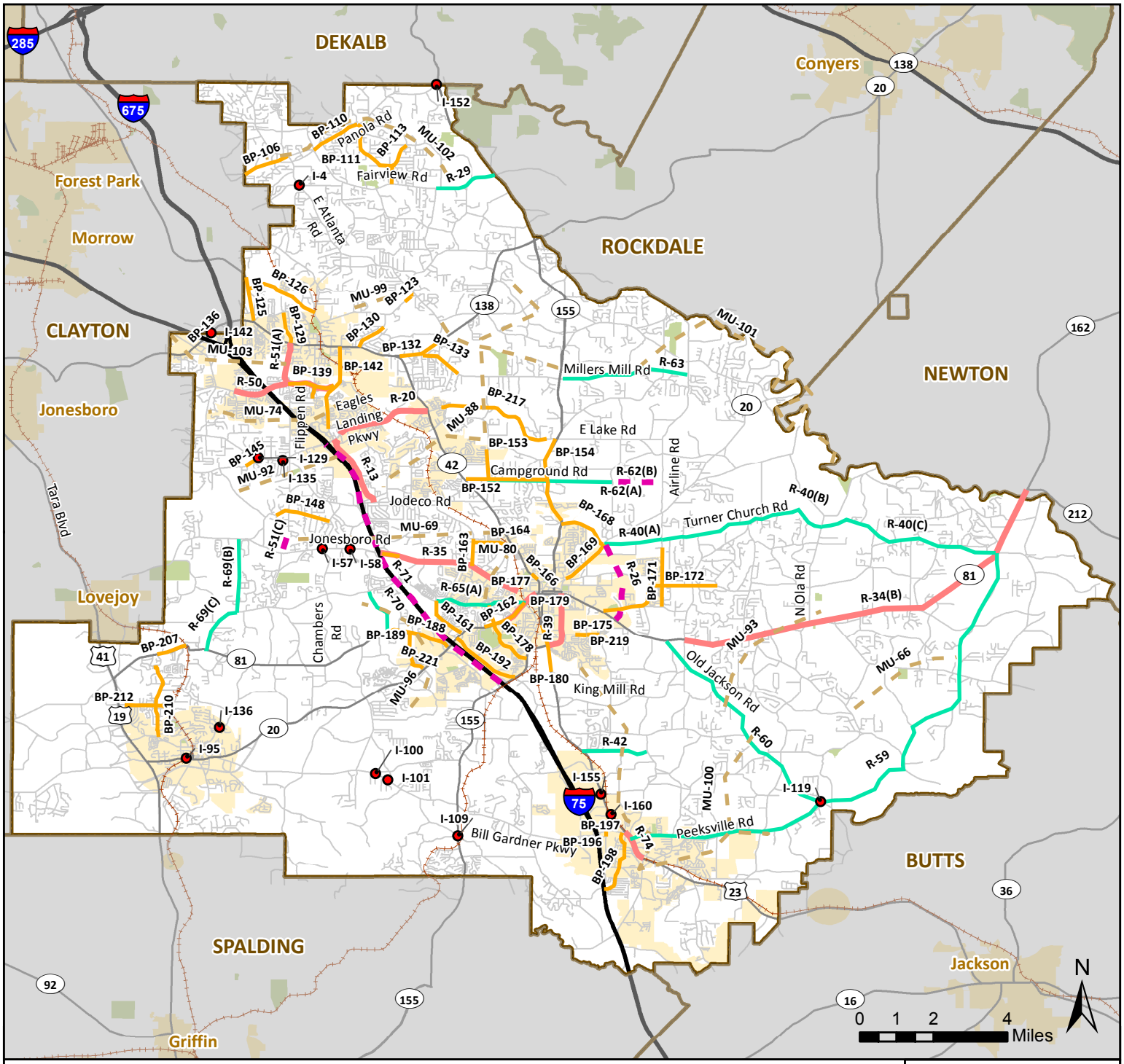
- Greenway Trails
- Sidewalks
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Sources: Henry County, Study Team

- Park/Recreation Area
- Cities
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OUR FUTURE IN MOTION
JOINT HENRY COUNTY/CITIES TRANSPORTATION PLAN





Recommended Long Range Projects

Henry County Joint Comprehensive Transportation Plan Update

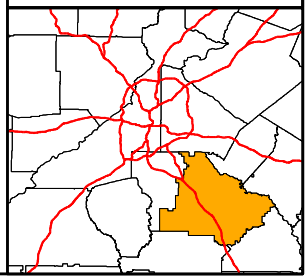
Project Type

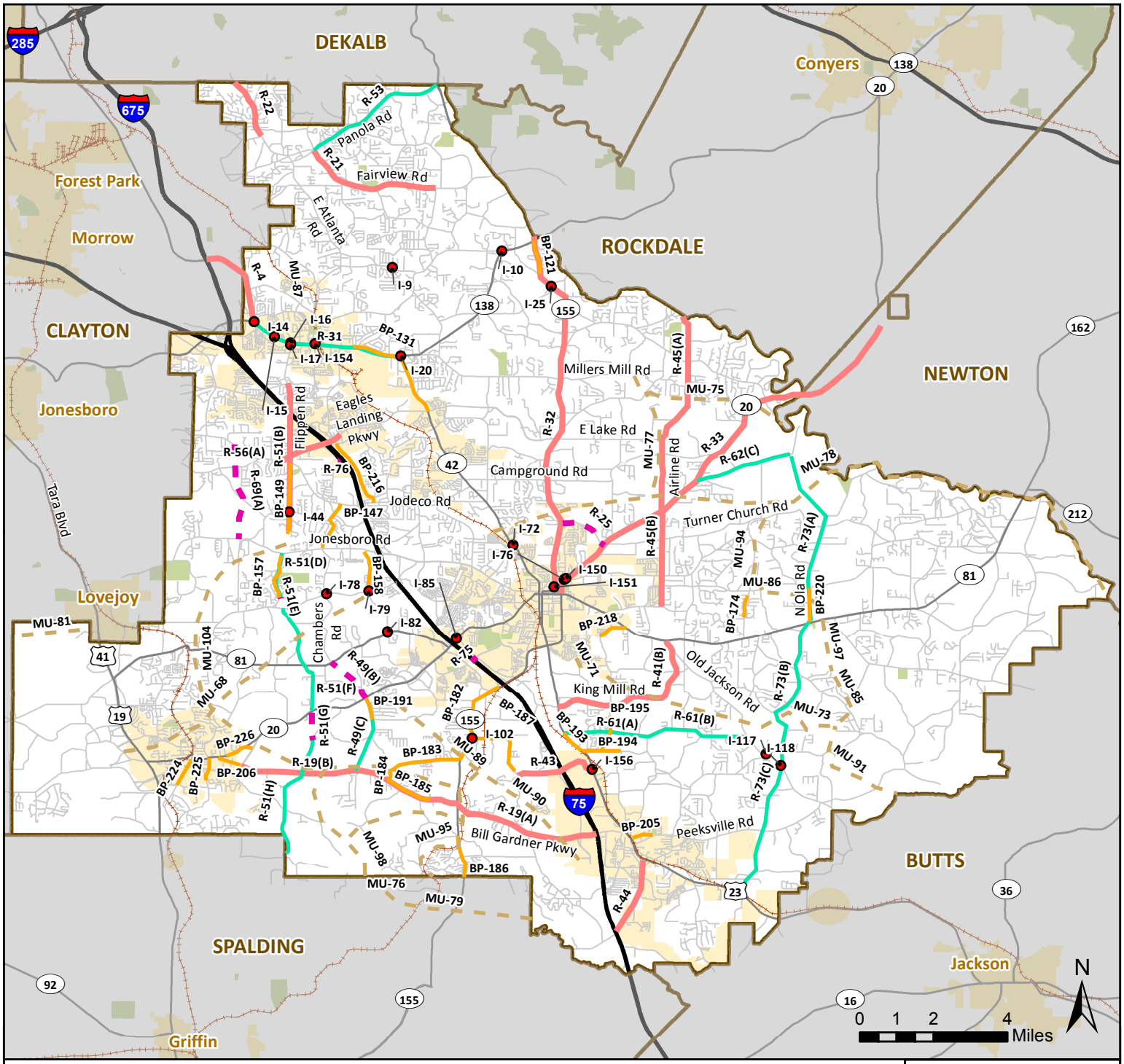
- Greenway Trails
- Sidewalks
- Roadway Widenings
- New Roadways
- Arterial Upgrades
- Intersections

Sources: Henry County, Study Team

- Park/Recreation Area
- Cities
- Counties
- Interstates
- US and State Routes
- Streets
- Railroads

OUR FUTURE IN MOTION
JOINT HENRY COUNTY/CITIES TRANSPORTATION PLAN





Recommended Unconstrained Projects

Henry County Joint Comprehensive Transportation Plan Update

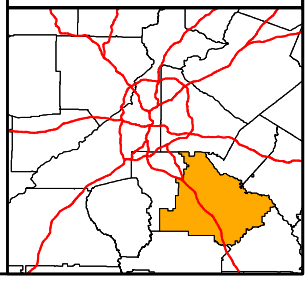
Project Type

- Greenway Trails
- Sidewalks
- Roadway Widenings
- New Roadways
- Arterial Upgrades
- Intersections

- Park/Recreation Area
- Cities
- Counties
- Interstates
- US and State Routes
- Streets
- Railroads

Sources: Henry County, Study Team

OUR FUTURE IN MOTION
JOINT HENRY COUNTY/CITIES TRANSPORTATION PLAN



ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 322050-
STP00-0037-02(056)
Clayton & Henry Counties
GDOT District 3 - Thomaston
GDOT District 7 - Metro Atlanta
SR 42 from SR 138/Henry to I-675/Clayton

OFFICE Design Policy & Support

DATE November 10, 2016

FROM for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED REVISED CONCEPT REPORT**

Attached is the approved Revised Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Hiral Patel, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Darryl VanMeter, State Innovative Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Eric Duff, State Environmental Administrator
Bill DuVall, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Monica Flournoy, State Materials and Testing Administrator
Patrick Allen, State Utilities Engineer
Richard Cobb, Statewide Location Bureau Chief
Michael Presley, District Engineer
Kathy Zahul, District Engineer
Adam Smith, District Preconstruction Engineer
Scott Lee, District Preconstruction Engineer
Scott Parker, District Utilities Engineer
Nicholas Fields, District Utilities Engineer
Kevin VanHoutin, Project Manager
BOARD MEMBER - 5th & 13th Congressional Districts

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
REVISED PROJECT CONCEPT REPORT

Project Type:	Widening	P.I. Number:	322050
GDOT District:	3, 7	County:	Clayton, Henry
Federal Route Number:	23	State Route Number:	42
	Project Number:	STP00-0037-02(056)	

The approved concept is being revised to 1) reflect the extension of the southern termini to south of SR 138 to provide for a second northbound thru lane through the SR 138 intersection, 2) reflect the inclusion of an 11-foot inside lane and a shared use path in the typical section, 3) reflect the replacement of the bridge culvert at Panther Creek with a bridge, and 4) reflect the inclusion of restricted crossing U-turn (RCUT) intersections between SR 138 and I-675.

Submitted for approval:

Consultant Designer – McGee Partners, Inc.	8/22/2016 Date
Albert Shelby State Program Delivery Engineer	9/17/16 Date
Kevin B. Van Haute C.L.B. KBVH GDOT Project Manager	9/01/2016 Date

Recommendation for approval:

* Eric Duff/KLP State Environmental Administrator	10-25-2016 Date
* For Christopher Raymond/KLP State Traffic Engineer	10-3-2016 Date
* Bill DuVall/KLP State Bridge Engineer	9-28-2016 Date

* Recommendations on file

- ☐ MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- ☐ Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

Matthew Fowler State Transportation Planning Administrator	Sept 23, 2016 Date

PLANNING, APPROVED CONCEPT, AND BACKGROUND

Project Justification Statement:

The proposed widening of SR 42/US 23 from SR 138 in Henry County to I-675 in Clayton County has long been a priority as part of a larger planned initiative to multi-lane SR 42 to improve mobility and connectivity from I-285 to the City of Stockbridge. The Concept for the widening of SR 42/US 23 from SR 138 to I-675 was approved by the Department on July 26, 1991. The project has been included in the Atlanta Regional Commission's Regional Transportation Plan since that time.

Land use along the project corridor largely consists of commercial development. There are several strip shopping centers, as well as small retail and service oriented businesses. On the southern end of the corridor much of the commercial development is associated with vehicle repair and maintenance, sales, and a salvage yard. Gas station convenience stores are concentrated on the north and south ends of the corridor at the project termini. There are some single family homes adjacent to the corridor, but much the residential development is within six to eight planned subdivisions accessed from secondary roads intersecting SR 42. There is one large church, Liberty Baptist Church, located at the intersection of SR 42 and Valley Hill Road. The smaller Rocky Mountain Church and cemetery are located on Old Macon Road, north of the intersection with SR 42. Finally institutional development includes the Clayton County Community Services Head Start Day Care facility at the intersection of SR 42 and Brookwood Boulevard, and a Henry County Waste Water Treatment facility accessed from Old Macon Highway. There are no large industrial or commercial employers or large educational facilities along the corridor.

The existing two lane section on this Urban Minor Arterial has insufficient capacity to accommodate projected traffic volumes exceeding 30,800 vehicles by 2042. As a result, Level of Service is projected to be E/F on the north end of the corridor, and D/E on the southern end in the same year. In addition to operational concerns for the corridor, crash rates for the latest years available (2011 to 2014) show crash and injury rates exceed statewide averages, in some years over twice the statewide average. No fatalities were recorded for the report years. The majority of the crashes have occurred at the signalized intersections of SR 42 with SR 138, Valley Hill Road and I-675 Ramps. At five locations along the corridor, substandard vertical curves do not provide stopping sight distance for the posted 45 mile per hour (mph) speed limit. Termini on both ends consist of four lane sections.

The major performance goals of the project are to improve mobility and operational efficiency along the corridor, reduce crash frequency and severity, and reduce congestion.

Prepared by McGee Partners & Edwards-Pitman Environmental.

Existing conditions:

SR 42/US 23 south of SR 138 is a five-lane roadway with urban shoulders, including sidewalks. The route transitions to a two-lane roadway with rural shoulders north of SR 138. . The route transitions to a five-lane roadway with urban shoulders without sidewalks as it approaches I-675. North of I-675, SR 42/US 23 is a four-lane roadway with raised median and urban shoulders without sidewalks. The route's intersections with SR 138, Valley Hill Road and the I-675 ramps are signalized. Panther Creek is conveyed under SR 42/US 23 through a quadruple 10'x9' bridge culvert. Major utilities along the project include a 24" Clayton County waterline from Valley Hill Road to north of Biscayne Road and one 30" and three 36" Williams-Transco gas pipelines which cross SR 42/US 23 just north of Panther Creek.

Description of the <u>approved</u> concept:

The proposed project would improve SR 42/US 23 from SR 138 in Henry County and the City of Stockbridge to I-675 in Clayton County, a distance of 2.3 miles. The existing two-lane roadway would be widened to four

12-foot lanes with 20' raised median with urban shoulders and sidewalks. The bridge culvert at Panther Creek would be replaced with a new quadruple 10'x9' bridge culvert. The intersections at SR 138, Valley Hill Road and the I-675 ramps would continue to be signalized.

Federal Oversight: ☐ PoDI ☐ Exempt ☒ State Funded ☐ Other

Projected Traffic as shown in the approved Concept Report: AADT
Open Year (2010): 26,100 Design Year (2030): 42,700

Updated Traffic: ADT 24 HR T: 7.0 %
Open Year (2022): 26,700 Design Year (2042): 33,930

Functional Classification (Mainline): Urban Minor Arterial Street

Complete Streets - Bicycle, Pedestrian, and/or Transit Standard Warrants:
Warrants met: ☐ None ☒ Bicycle ☒ Pedestrian ☐ Transit
Warrants were met for Bicycle and Pedestrian, but not for Transit. The corridor is not served by fixed-route transit, nor is the corridor within a 3/4-mile pedestrian catchment area of an existing fixed-route transit facility. Cyclists will be accommodated on 10-foot shared use path on one side of SR 42. Pedestrians will be accommodated on the shared use path and a 5-foot sidewalk on the other side of SR 42. These accommodations will be included on the proposed bridge over Panther Creek.

VE Study anticipated: ☐No ☐ Yes ☒ Completed – Date: 4/4/2011
(VE Implementation Letter is attached.)

PROPOSED REVISIONS

Approved Features:	Proposed Features:
• **Project Termini** The approved project limits are from SR 138 to I-675.	• **Project Termini** From approximately 800 feet south of SR 138 to I-675
• **Typical Section** The approved typical section includes a four-lane roadway with 20-foot raised median, 12-foot lanes, 16-foot urban shoulder with 6-foot buffers and 5-foot sidewalks.	• **Typical Section** Four-lane roadway with 20-foot raised median, 12-foot outside lanes and 11-foot inside lanes, 16-foot urban shoulder with 6-foot buffers and a 5-foot sidewalk on one side and a 10-foot shared use path on the other
• **Bridge Type** The approved concept calls for the existing quadruple 10-foot x 9-foot bridge culvert at Panther Creek to be replaced by a new quadruple 10-foot x 9-foot bridge culvert.	• **Bridge Type** Existing quadruple 10-foot x 9-foot bridge culvert at Panther Creek will be replaced by an approximately 110-foot long x 89-foot wide single-span bridge.
• **Intersection Control** The approved concept calls for maintaining signalized intersections along SR 42 at SR 138, Valley Hill Road and the I-675 ramps, along with providing full-access median openings at other side roads along the corridor, some of which will be evaluated for signal warrants.	• **Intersection Control** SR 42 at SR 138 and the I-675 ramps will be maintained as conventional signalized intersections. A series of restricted crossing U-turn (RCUT) intersections will be constructed between SR 138 and I-675 at selected side roads, some of which will be evaluated for signal warrants.

Reason(s) for change:

- **Project Termini.** The southern project terminus was extended to approximately 800 feet south of SR 138 to provide for adequate length dual left turn lanes to SR 138 westbound while transitioning the tow northbound SR 42/US 23 thru lanes through the SR 138 intersection.
- **Typical Section**. The inside basic lane width was reduced to 11 feet per the VE Implementation Letter from April 2011 and a shared use path was included in order to comply with the Department's warrants for bicycle accommodation along the SR 42 corridor.
- **Bridge Type.** Bridge type was revised to construct a conventional bridge over Panther Creek due to concerns with anticipated increase in maintenance of a bridge culvert related to debris, siltation and scour with undermining.
- **Intersection Control.** Intersection control was revised to include RCUT intersections, in lieu of full-access median openings, in order to reduce delay, frequency of crashes and severity of crashes along SR 42.

Design Variances and/or Exceptions needed: None anticipated.

ENVIRONMENTAL AND PERMITS

Potential environmental impacts of proposed revision: The typical section would be reduced to minimize impacts to eligible historic resources across from one another along the corridor. Horizontal alignment shifts in some areas would avoid impacts to eligible historic resources. Waters of the US have been identified, and impacts determined based on revised design.

Have proposed revisions been reviewed by environmental staff? ☐ No ☒ Yes

Environmental responsibilities (Studies/Documents/Permits): The Design Consultant would be responsible for resource identification, assessment of impacts and preparation of permits.

Air Quality:

Is the project located in a PM 2.5 Non-attainment area?	☒ No	☐ Yes
Is the project located in an Ozone Non-attainment area?	☐ No	☒ Yes
Is a Carbon Monoxide hotspot analysis required?	☐ No	☒ Yes

The proposed changes do not differ significantly from the conforming plan's description. The proposed limits would remain SR 138 to the south and I-675 to the north, and proposed widening remains two to four lanes. The proposed changes are not anticipated to result in significant differences to air quality. Based on Level of Service and design year traffic, a CO hotspot analysis is anticipated.

Environmental Comments and Information:

NEPA: The project is now proposed to be constructed with state funds only. No NEPA or GEPA Document is required.

Ecology: Habitat is present for pink lady slipper, and would require survey between April and June. Removal of the existing culvert would require survey for protected altimaha shiner. Clear spanning the stream with a single span bridge instead of replacing the culvert would avoid impacts. Impacts to streams are likely, as well as within their buffers. Regional Permit No. 96 is anticipated, as well as a buffer variance.

Archeology: An archaeology Phase I survey has not been conducted for the corridor. Potential impacts to archaeological resources have not been determined.

History: The proposed widening would require property within the boundary of two eligible resources located across from one another. A Memorandum of Agreement is anticipated to mitigate impacts to these resources.

Air Quality: A quantitative hotspot analysis would be required for CO.
Public Involvement: A PIOH was held on July 28, 2016. A meeting synopsis is attached.

MS4 Permit Compliance – Is the project located in a MS4 area? ☐ No ☒ Yes

PROJECT COST AND ADDITIONAL INFORMATION

Item	Estimated Cost	Date of Estimate	Funded By
Base Construction Cost:	$20,599,485	10/14/2016	
Engineering and Inspection:	$1,029,974	10/14/2016	
Contingencies:	$2,595,535	10/14/2016	
Liquid AC Adjustment:	$707,653	10/14/2016	
Total Construction Cost:	$24,932,647		GDOT
Right-of-Way:	$11,182,000	8/17/2016	GDOT
Utilities (reimbursable costs):	$1,932,000	6/7/2016	GDOT
Environmental Mitigation:	$74,000	8/19/2016	GDOT
TOTAL PROJECT COST:	**$38,120,647**		

Recommendation: It is recommended that the project termini, typical section, bridge type and intersection control be revised as described herein, and for the concept to be approved for implementation.

Comments: A robust traffic operations analysis is planned to further analyze the RCUTs and U-Turn Crossovers in order to refine their locations. Spacing between RCUTs and U-turn Crossovers will be evaluated for the need to prepare any Design Variances. Driveway locations and design will be refined as the preliminary design phase commences.

Attachments:

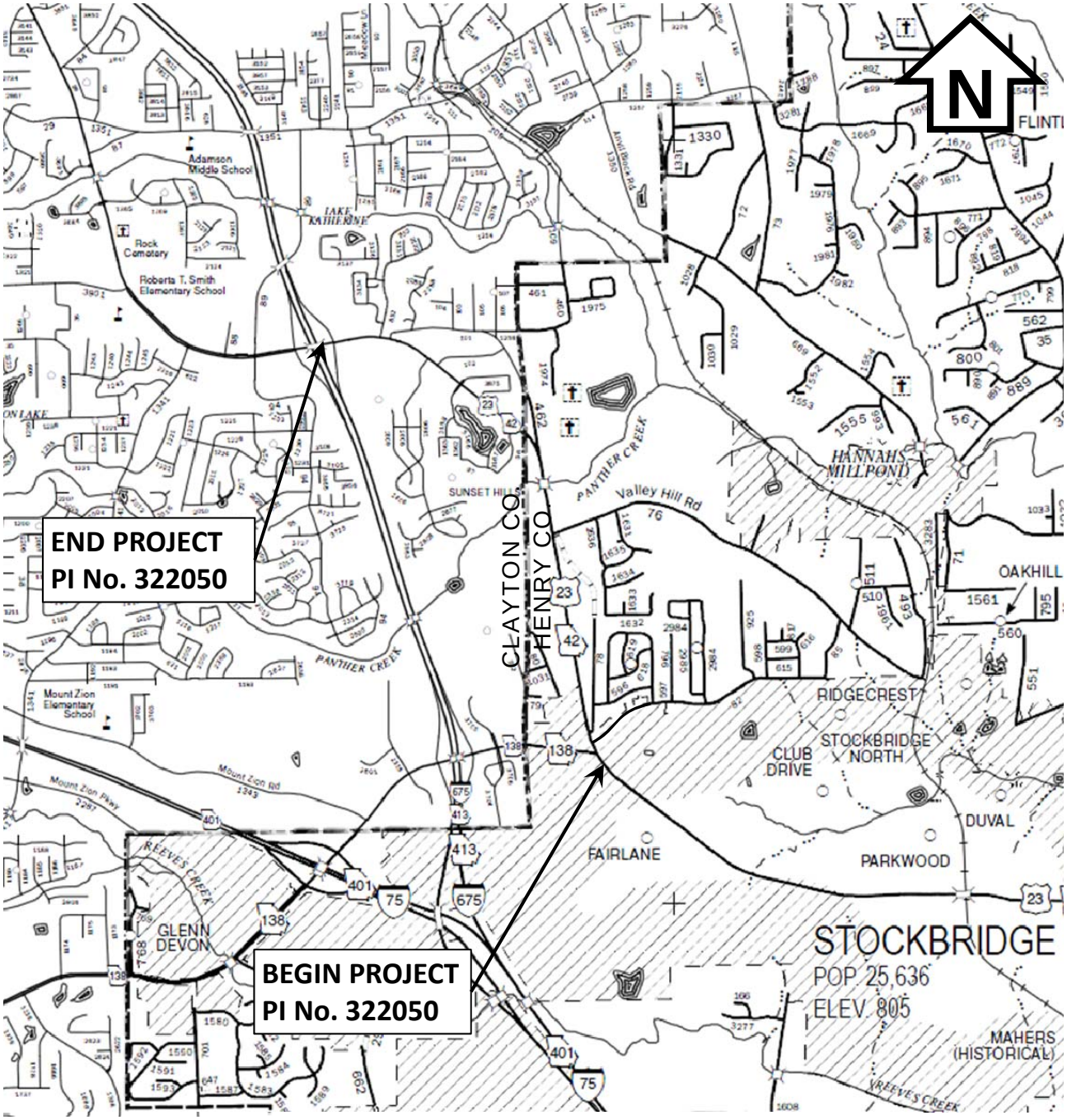
1. Location Map
2. Concept Layout
3. Typical Sections
4. Cost Estimates
5. Conforming plan's network schematics showing thru lanes
6. VE Implementation Letter
7. Crash Summary
8. Traffic Diagrams
9. Traffic Analysis Summary
10. Concept Level Hydrology Study for MS4 Permit
11. Concept Team Meeting Minutes, Held June 8, 2016
12. PIOH Synopsis

APPROVALS

Concur: _____
Director of Engineering

Approve: _____ _____
Chief Engineer Date

PROJECT LOCATION MAP
PI NO. 322050, CLAYTON/HENRY COUNTIES
SR 42 FROM SR 138 TO I-675



CONCEPTUAL LAYOUT
SR 42 (PROPOSED)
FROM SR 138/HENRY
TO I-675/CLAYTON
STP00-0037-02(058)
P.I. NO. 322050
SHEET 1 OF 5

CLAYTON/HENRY COUNTY, GEORGIA
AUGUST 2016

Georgia Department of Transportation

McGee Partners, Inc.
www.mcgeepartners.com

SCALE IN FEET

0 200 400 600

POTENTIAL STORMWATER SWALE
SR 138
EXIST R/W
215+00
220+00
225+00
230+00
210+00
205+00
200+00
DAVIDSON PARKWAY
SR 42/US 23
N HENRY BOULEVARD
P.C. 208+25.52
212+92.59
203+01.95
223+82.20
REQ'D R/W
POTENTIAL STORMWATER POND
DAVIS ROAD
CLIFFORD COURT
OLD ATLANTA HIGHWAY
POTENTIAL DISPLACEMENT (TYP.)
HISTORIC RESOURCE #10
HISTORIC RESOURCE #11
DANIEL DR
25' STREAM BUFFER
STREAM
ESA-25' STREAM BUFFER

CONCEPTUAL LAYOUT
SR 42 (PROPOSED)
FROM SR 138/HENRY
TO I-675/CLAYTON
STP00-0037-02(058)
P.I. NO. 322050
SHEET 2 OF 5

CLAYTON/HENRY COUNTY, GEORGIA
AUGUST 2016

Georgia Department of Transportation

McGee Partners, Inc.
www.mcgeepartners.com

SCALE IN FEET

0 200 400 600

230+00
235+00
240+00
245+00
250+00
255+00
232+24.64
EXIST R/W
P.C.
233+24.64
P.T.
237+56.06
REQ'D R/W
REQ'D R/W
REQ'D R/W
POTENTIAL
DISPLACEMENT
(TYP.)

CONCEPTUAL LAYOUT
SR 42 (PROPOSED)
FROM SR 138/HENRY
TO I-675/CLAYTON
STP00-0037-02(058)
P.I. NO. 322050
SHEET 3 OF 5

CLAYTON/HENRY COUNTY, GEORGIA
AUGUST 2016

Georgia Department of Transportation

McGee Partners, Inc.
www.mcgeepartners.com

SCALE IN FEET

0 200 400 600

+00
260+00
265+00
270+00
275+00
280+00
285+12.50
290+00
P.I. 2755+00
SR-42/US-23
N HENRY BOULEVARD
OLD MACO
SUNSET HILLS BOULEVARD
EXIST R/W
REQ'D R/W
SR 42/US 23 MACON HIGHWAY
HISTORIC RESOURCE #2
ESA-HISTORICAL CHURCH AND CEM
ESA-CEMETARY
ESA-25' STREAM BUFFER
APPROX. 100-YEAR FLOODPLAIN LIMIT
POTENTIAL STORMWATER POND
REPLACE EXISTING BOX CULVERT WITH BRIDGE
POTENTIAL STORMWATER POND (ALTERNATIVE LOCATION)
APPROX. STREAM BUFFER
VALLEY HILL ROAD

CONCEPTUAL LAYOUT
SR 42 (PROPOSED)
FROM SR 138/HENRY
TO I-675/CLAYTON
STP00-0037-02(058)
P.I. NO. 322050
SHEET 4 OF 5

CLAYTON/HENRY COUNTY, GEORGIA
AUGUST 2016

Georgia Department of Transportation

McGee Partners, Inc.
www.mcgeepartners.com

SCALE IN FEET

0 200 400 600

SR 42/US 23 MACON HIGHWAY
SUNSET HILLS BOULEVARD
OLD MACON HIGHWAY
BROOKWOOD BOULEVARD
AUGUSTINE PLACE
EDWARD ROAD
POTENTIAL STORMWATER POND
HISTORIC RESOURCE #22
HISTORIC RESOURCE #24
ESA-HISTORICAL CHURCH AND CEMETARY
ESA-POTENTIAL WETLANDS
STREAM
REQ'D R/W
EXIST. R/W
P.C. 284+37.88
P.I. 298+03.88
P.T. 293+37.22
280+00
285+00
290+00
295+00
300+00
305+00
285+12.50
284+12.50

CONCEPTUAL LAYOUT
SR 42 (PROPOSED)
FROM SR 138/HENRY
TO I-675/CLAYTON
STP00-0037-02(058)
P.I. NO. 322050
SHEET 5 OF 5

CLAYTON/HENRY COUNTY, GEORGIA
AUGUST 2016

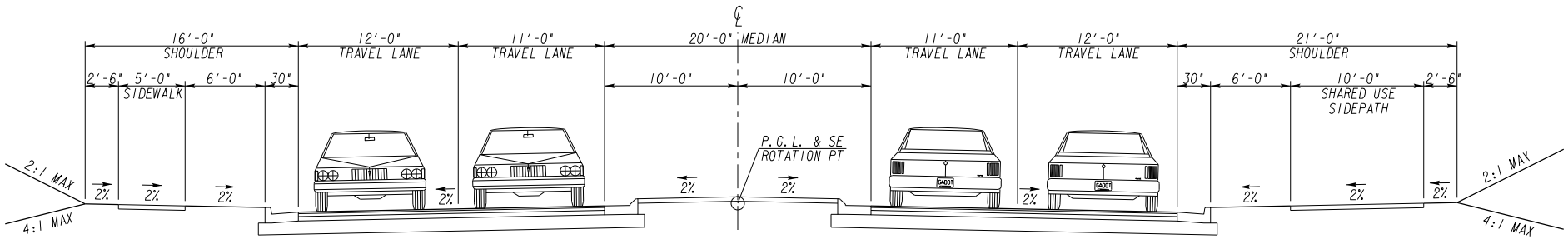
Georgia Department of Transportation

McGee Partners, Inc.
www.mcgeepartners.com

SCALE IN FEET

0 200 400 600

I-675 SB ON RAMP
I-675 NB OFF RAMP
I-675 SB
I-675 SB OFF RAMP
I-675 NB
I-675 NB ON RAMP
POTENTIAL STORMWATER POND
POTENTIAL STORMWATER POND
335+00
336+18
330+00
SR 42/US 23 MACON HIGHWAY
P.T. 324+10
325+00
320+00 EXIST R/W
315+00
310+00
P.C. 309+08
BISCAYNE BOULEVARD
STREAM
REQ'D R/W
REQ'D R/W
HOMESTEAD ROAD
ELLENWOOD DRIVE
CROOKED CREEK DRIVE



TYPICAL SECTION
URBAN WITH MEDIAN
SR 42/US 23

N.T.S.

CONCEPTUAL TYPICAL SECTION
SR 42
FROM SR 138/HENRY
TO I-675/CLAYTON
STP00-0037-02(058)
P.I. NO. 322050

CLAYTON/HENRY COUNTY, GEORGIA
APRIL 2016

Georgia Department of Transportation

McGee Partners, Inc.
www.mcgeepartners.com

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. **322050-**

OFFICE Program Delivery

PROJECT DESCRIPTION

SR 42 FROM SR 138/HENRY TO I-675 CLAYTON

DATE October 14, 2016

Chandria L. Brown for

From: Albert V. Shelby, III, State Program Delivery Engineer

To: Lisa L. Myers, State Project Review Engineer
via Email Mailbox: **CostEstimatesandUpdates@dot.ga.gov**

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Kevin VanHouten

MGMT LET DATE 5/15/2020

MGMT ROW DATE 2/15/2018

PROGRAMMED COSTS (TPro W/OUT INFLATION)

CONSTRUCTION	$	22,101,668.53	DATE	9/2/2016
RIGHT OF WAY	$		DATE	
UTILITIES	$		DATE	

LAST ESTIMATE UPDATE

REVISED COST ESTIMATES

CONSTRUCTION*	$	24,932,647.16
RIGHT OF WAY	$	
UTILITIES	$	

*Cost Contains **12** % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Cost estimate update prepared during concept validation. Cost increase due to inclusion of potential MS4 facilities, refined quantity takeoffs, increased unit costs, direction to replace Panther Creek culvert with bridge in lieu of extending the culvert. Construction contingency of 12% used since project development is still in concept stage on a capacity adding reconstruction project.

CONTINGENCY SUMMARY

A.	**CONSTRUCTION COST ESTIMATE:**	$ 20,599,484.86	Base Estimate From CES		
B.	**ENGINEERING AND INSPECTION (E & I):**	$ 1,029,974.24	Base Estimate (A) x	5	%
C.	**CONTINGENCY:**	$ 2,595,535.09	Base Estimate (A) + E & I (B) x	12	%
			See % Table in "Risk Based Cost Estimation" Memo		
D.	**TOTAL LIQUID AC ADJUSTMENT:**	$ 707,652.96	Total From Liquid AC Spreadsheet		
E.	**CONSTRUCTION TOTAL:**	$ **24,932,647.16**	(A + B + C + D = E)		

REIMBURSABLE UTILTY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	$ -

ATTACHMENTS: (File Copy in the Project Cost Estimate Folder)

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO.	STP00-0037-02(056)	CALL NO.	0/00/2016
P.I. NO.	322050-		
DATE	10/14/2016		

INDEX (TYPE)	**DATE**	**INDEX**
REG. UNLEADED	Oct-16	
DIESEL		
LIQUID AC		$ 339.00

Link to AC Index:
http://www.dot.ga.gov/PS/Materials/AsphaltFuelIndex

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)				**697570.47**	**$ 697,570.47**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	542.40	
Monthly Asphalt Cement Price month project let (APL)			$	339.00	
Total Monthly Tonnage of asphalt cement (TMT)				3429.55	

ASPHALT	**Tons**	**%AC**	**AC ton**
Leveling	10210	5.0%	510.5
12.5 OGFC		5.0%	0
12.5 mm	12742	5.0%	637.1
9.5 mm SP	590	5.0%	29.5
25 mm SP	25880	5.0%	1294
19 mm SP	19169	5.0%	958.45
	68591		**3429.55**

BITUMINOUS TACK COAT

Price Adjustment (PA)				**$ 10,082.49**	**$ 10,082.49**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	542.40	
Monthly Asphalt Cement Price month project let (APL)			$	339.00	
Total Monthly Tonnage of asphalt cement (TMT)				49.56975974	

Bitum Tack Gals	gals/ton	tons
11541	232.8234	49.5697597

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				**0**	**$ -**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	542.40	
Monthly Asphalt Cement Price month project let (APL)			$	339.00	
Total Monthly Tonnage of asphalt cement (TMT)				0	

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT	**$ 707,652.96**

DETAILED COST ESTIMATE

JOB NUMBER: 322050-
SPEC YEAR: 13
DESCRIPTION: SR 42 FROM SR 138/HENRY TO I-675/CLAYTON
FED/STATE PROJECT NUMBER: STP00-0037-02(056)
Assigned Control Group: MCGEE PARTNERS CONSULTANT

ITEMS FOR JOB 322050-

LINE NUMBER	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0015	150-1000	1.00	LS	$1,560,000.00000	TRAFFIC CONTROL -	$1,560,000.00
0020	150-5010	12.00	EA	$8,138.61592	TRAF CTRL,PORTABLE IMPACT ATTN	$97,663.39
0025	153-1300	1.00	EA	$92,795.53596	FIELD ENGINEERS OFFICE TP 3	$92,795.54
0030	163-0232	94.00	AC	$509.69687	TEMPORARY GRASSING	$47,911.51
0035	163-0240	379.00	TN	$173.10195	MULCH	$65,605.64
0040	163-0300	17.00	EA	$1,378.53620	CONSTRUCTION EXIT	$23,435.12
0045	163-0503	16.00	EA	$449.84001	CONSTR AND REMOVE SILT CONTROL GATE,TP 3	$7,197.44
0050	163-0527	266.00	EA	$322.01660	CNST/REM RIP RAP CKDM,STN P RIPRAP/SN BG	$85,656.42
0055	163-0531	10.00	EA	$12,954.62430	CONSTR & REM SEDIMENT BASIN,TP 1,STA NO-	$129,546.24
0060	163-0550	153.00	EA	$144.60104	CONS & REM INLET SEDIMENT TRAP	$22,123.96
0065	165-0010	42510.00	LF	$0.35394	MAINT OF TEMP SILT FENCE, TP A	$15,045.99
0070	165-0030	42510.00	LF	$0.71664	MAINT OF TEMP SILT FENCE, TP C	$30,464.37
0075	165-0041	266.00	LF	$3.58346	MAINT OF CHECK DAMS - ALL TYPES	$953.20
0080	165-0060	10.00	EA	$4,724.77333	MAINT OF TEMP SEDIMENT BASIN,STA NO -	$47,247.73
0085	165-0087	16.00	EA	$98.46280	MAINT OF SILT CONTROL GATE, TP 3	$1,575.40
0090	165-0101	17.00	EA	$602.39307	MAINT OF CONST EXIT	$10,240.68
0095	165-0105	153.00	EA	$51.41283	MAINT OF INLET SEDIMENT TRAP	$7,866.16
0100	167-1000	11.00	EA	$459.70471	WATER QUALITY MONITORING AND SAMPLING	$5,056.75
0105	167-1500	32.00	MO	$503.86031	WATER QUALITY INSPECTIONS	$16,123.53
0110	171-0010	42510.00	LF	$1.66980	TEMPORARY SILT FENCE, TYPE A	$70,983.20
0115	171-0030	42510.00	LF	$3.21865	TEMPORARY SILT FENCE, TYPE C	$136,824.81
0120	201-1500	1.00	LS	$864,000.00000	CLEARING & GRUBBING -	$864,000.00
0125	205-0001	86790.00	CY	$10.00000	UNCLASS EXCAV	$867,900.00
0130	206-0002	99760.00	CY	$12.00000	BORROW EXCAV, INCL MATL	$1,197,120.00
0134	207-0203	62.00	CY	$58.85105	FOUND BKFILL MATL, TP II	$3,648.77
0135	310-1101	62645.00	TN	$23.00517	GR AGGR BASE CRS, INCL MATL	$1,441,158.87
0140	318-3000	800.00	TN	$24.37160	AGGR SURF CRS	$19,497.28
0145	402-1812	10210.00	TN	$69.17468	RECYL AC LEVELING,INC BM&HL	$706,273.48
0149	402-3103	590.00	TN	$95.58192	REC AC 9.5 MM SP,TPII,GP2, INCL BM & H L	$56,393.33
0150	402-3121	25880.00	TN	$68.04789	RECYL AC 25MM SP,GP1/2,BM&HL	$1,761,079.39
0160	402-3190	19169.00	TN	$69.58640	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	$1,333,901.70
0164	402-4510	12742.00	TN	$79.45244	RECYL AC 12.5 MM SP,GP2ONLY,INC P-MBM&HL	$1,012,382.99
0169	413-0750	11697.00	GL		TACK COAT	
0170	432-5010	32980.00	SY	$2.47291	MILL ASPH CONC PVMT,VARB DEPTH	$81,556.57
0175	433-1100	587.00	SY	$182.66498	REF CONC APPR SL/INCL CURB	$107,224.34
0180	441-0016	280.00	SY	$41.45751	DRIVEWAY CONCRETE, 6 IN TK	$11,608.10
0185	441-0018	800.00	SY	$51.00037	DRIVEWAY CONCRETE, 8 IN TK	$40,800.30
0190	441-0104	22150.00	SY	$21.93567	CONC SIDEWALK, 4 IN	$485,875.09
0195	441-0740	12310.00	SY	$17.70906	CONC MEDIAN, 4 IN	$217,998.53
0200	441-4030	1220.00	SY	$48.97465	CONC VALLEY GUTTER, 8 IN	$59,749.07
0205	441-6222	30170.00	LF	$18.37397	CONC CURB & GUTTER/ 8X30TP2	$554,342.67
0210	441-6740	21830.00	LF	$14.60416	CONC CURB & GUTTER/ 8X30 TP7	$318,808.81
0215	446-1100	7680.00	LF	$3.96969	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	$30,487.22
0219	500-3101	100.00	CY	$950.52943	CLASS A CONCRETE	$95,052.94
0220	500-3200	60.00	CY	$523.07834	CL B CONC	$31,384.70
0225	500-3800	17.00	CY	$1,038.92276	CL A CONC, INCL REINF STEEL	$17,661.69
0234	511-1000	8428.00	LB	$1.05785	BAR REINF STEEL	$8,915.56
0235	543-9000	1.00	LS	$1,064,800.00000	CONSTR OF BRIDGE COMPLETE -	$1,064,800.00

LINE NUMBER	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0240	550-1180	20160.00	LF	$34.67174	STM DR PIPE 18,H 1-10	$698,982.28
0245	550-1240	5861.00	LF	$43.59328	STM DR PIPE 24,H 1-10	$255,500.21
0250	550-1360	6171.00	LF	$63.07093	STM DR PIPE 36,H 1-10	$389,210.71
0255	550-1480	1947.00	LF	$100.90766	STM DR PIPE 48,H 1-10	$196,467.21
0260	550-4224	18.00	EA	$693.23188	FLARED END SECT 24 IN, ST DR	$12,478.17
0265	550-4236	7.00	EA	$1,293.34430	FLARED END SECT 36 IN, ST DR	$9,053.41
0270	603-2024	2389.00	SY	$51.17489	STN DUMPED RIP RAP, TP 1, 24	$122,256.81
0275	603-7000	2389.00	SY	$3.91869	PLASTIC FILTER FABRIC	$9,361.75
0280	610-9007	1.00	LS	$50,000.00000	REM PORT X CLVT, CONC, STA-	$50,000.00
0285	620-0100	6000.00	LF	$26.76393	TEMP BARRIER, METHOD NO. 1	$160,583.58
0289	621-6203	1053.00	LF	$1,250.00000	CONC SIDE BARRIER, TP 2-SC	$1,316,250.00
0290	632-0003	5.00	EA	$9,820.44778	CHANGEABLE MESS SIGN,PORT,TP 3	$49,102.24
0295	634-1200	88.00	EA	$114.90391	RIGHT OF WAY MARKERS	$10,111.54
0300	636-1020	634.00	SF	$14.11013	HWY SGN,TP1MAT,REFL SH TP3	$8,945.82
0305	636-1033	1349.00	SF	$16.13615	HWY SIGNS, TP1MAT,REFL SH TP 9	$21,767.67
0310	636-2070	3147.00	LF	$6.77376	GALV STEEL POSTS, TP 7	$21,317.02
0315	636-2080	1203.00	LF	$9.27445	GALV STEEL POSTS, TP 8	$11,157.16
0320	639-2002	900.00	LF	$5.02815	STEEL WIRE STRAND CABLE, 3/8	$4,525.34
0325	639-3004	12.00	EA	$11,209.01374	STEEL STRAIN POLE, TP IV	$134,508.16
0330	641-1100	101.00	LF	$72.46925	GUARDRAIL, TP T	$7,319.39
0335	641-1200	1440.00	LF	$19.10861	GUARDRAIL, TP W	$27,516.40
0340	641-5001	3.00	EA	$1,024.68856	GUARDRAIL ANCHORAGE, TP 1	$3,074.07
0345	641-5012	3.00	EA	$2,146.85671	GUARDRAIL ANCHORAGE, TP 12	$6,440.57
0350	643-1171	2609.00	LF	$48.00000	CH LK FEN, ZC COAT, 8', 9 GA	$125,232.00
0355	643-8010	8.00	EA	$677.70595	GATE, CHAIN LINK ZC COAT -	$5,421.65
0360	643-8200	2927.00	LF	$1.41059	BARRIER FENCE (ORANGE), 4 FT	$4,128.80
0365	647-1000	1.00	LS	$600,000.00000	TRAF SIGNAL INSTALLATION NO -	$600,000.00
0370	653-0120	255.00	EA	$68.92186	THERM PVMT MARK, ARROW, TP 2	$17,575.07
0375	653-1501	73560.00	LF	$0.33433	THERMO SOLID TRAF ST 5 IN, WHI	$24,593.31
0380	653-1502	39240.00	LF	$0.43307	THERMO SOLID TRAF ST, 5 IN YEL	$16,993.67
0385	653-1704	2520.00	LF	$5.85049	THERM SOLID TRAF STRIPE,24,WH	$14,743.23
0390	653-1804	15624.00	LF	$1.91418	THERM SOLID TRAF STRIPE, 8,WH	$29,907.15
0395	653-3501	30840.00	GLF	$0.30614	THERMO SKIP TRAF ST, 5 IN, WHI	$9,441.36
0400	653-6004	1638.00	SY	$3.50599	THERM TRAF STRIPING, WHITE	$5,742.81
0405	653-6006	4133.00	SY	$3.24821	THERM TRAF STRIPING, YELLOW	$13,424.85
0410	654-1001	210.00	EA	$3.65781	RAISED PVMT MARKERS TP 1	$768.14
0415	654-1003	3050.00	EA	$3.16390	RAISED PVMT MARKERS TP 3	$9,649.90
0420	668-1100	153.00	EA	$2,602.70754	CATCH BASIN, GP 1	$398,214.25
0425	668-1110	153.00	LF	$196.81591	CATCH BASIN, GP 1, ADDL DEPTH	$30,112.83
0430	668-2105	12.00	EA	$2,747.69000	DROP INLET, GP 1, SPCL DES	$32,972.28
0435	700-6910	33.00	AC	$992.38369	PERMANENT GRASSING	$32,748.66
0440	700-7000	253.00	TN	$96.42760	AGRICULTURAL LIME	$24,396.18
0445	700-8000	29.00	TN	$596.58896	FERTILIZER MIXED GRADE	$17,301.08
0450	700-8100	6305.00	LB	$2.22517	FERTILIZER NITROGEN CONTENT	$14,029.70
0455	700-9300	31460.00	SY	$6.35280	SOD	$199,859.09
0460	711-0100	17651.00	SY	$4.36000	TURF REINFORCING MATTING, TP 1	$76,958.36
0465	711-0200	17651.00	SY	$2.90000	TURF REINFORCING MATTING, TP 2	$51,187.90
0470	716-2000	47190.00	SY	$0.83410	EROSION CONTROL MATS, SLOPES	$39,361.18
0475	999-0060	560.00	SY	$72.91000	BIORETENTION AREA	$40,829.60
0480	999-3110	5.00	EA	$50,000.00000	DETENTION POND	$250,000.00
0485	999-3155	2000.00	LF	$62.01191	DRY SWALE EDGE DRAIN	$124,023.82
Grand Total						**$20,599,484.86**

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 8/17/2016 Project: PI#322050
Revised: County: Henry/Clayton
PI: 322050
Description: SR 42 Widening From 138 to I-675
Project Termini: SR 42 Widening From 138 to I-675
Existing ROW: Varies
Parcels: 112 Required ROW: Varies

Land and Improvements		$8,475,037.50
Proximity Damage	*$150,000.00*	
Consequential Damage	*$125,000.00*	
Cost to Cures	*$275,000.00*	
Trade Fixtures	*$25,000.00*	
Improvements	*$2,250,000.00*	
Valuation Services		$560,000.00
Legal Services		$713,100.00
Relocation		$364,000.00
Demolition		$130,000.00
Administrative		$939,000.00
TOTAL ESTIMATED COSTS		$11,181,137.50
TOTAL ESTIMATED COSTS (ROUNDED)		***$11,182,000.00***

Preparation Credits	Hours	Signature

Prepared By: LaShone Alexander CG#: 286999 08/17/2016 (DATE)
Approved By: LaShone Alexander CG#: 286999 08/17/2016 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

allsop

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE **STP00-0037-02(056), Henry-Clayton County, P.I. # 322050** OFFICE Thomaston
SR 42 from SR 138/Henry to I-675/Clayton

DATE June 7, 2016

FROM Scott Parker, District Utilities Engineer

TO Kevin B. VanHouten, Project Manager

SUBJECT **PRELIMINARY UTILITY COST (ESTIMATE)**

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for each utility with facilities potentially located within the project limits.

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
Atlanta Gas Light	750,000	
BellSouth d/b/a AT&T Georgia	420,000	
Charter Communications	24,000	
Clayton County Water	192,000	192,000
Comcast	96,000	
Georgia Power (Distribution)		420,000
Henry County Water & Sewer	120,000	120,000
Williams Gas Pipeline/Transco		1,200,000
TOTALS	**$ 1,602,000**	**$ 1,932,000**

Total Preliminary Utility Cost Estimate **3,312,000**.

If you have any questions, please contact Harland Smith at 706-646-7606.

SP/HS

cc:

EDWARDS-PITMAN

August 19, 2016

Tommy Crochet, P.E.
McGee Partners, Inc.
13 Corporate Boulevard NE, Suite 200
Atlanta, Georgia 30329

Subject: SR 42 Widening
PI No. 322050
Clayton and Henry Counties
Estimated Mitigation Costs

Dear Tommy,

Based on the current design, the proposed project would impact one water of the US along the corridor, identified as Intermittent Stream 2 (IS 2). Approximately 390 linear feet of stream and 21,000 square feet of IS 2 buffer would be impacted with proposed improvements.

The project is located within Hydrologic Unit Code (HUC) 03070103. Assuming worst case factors to estimate required mitigation credits, stream impacts would require approximately 1,776 mitigation credits, and buffer encroachment would require approximately 531 credits. Using the latest per-credit cost of $31.75 provided by Georgia Department of Transportation (January 2016) the table below provides a total estimate for mitigation associated with these impacts.

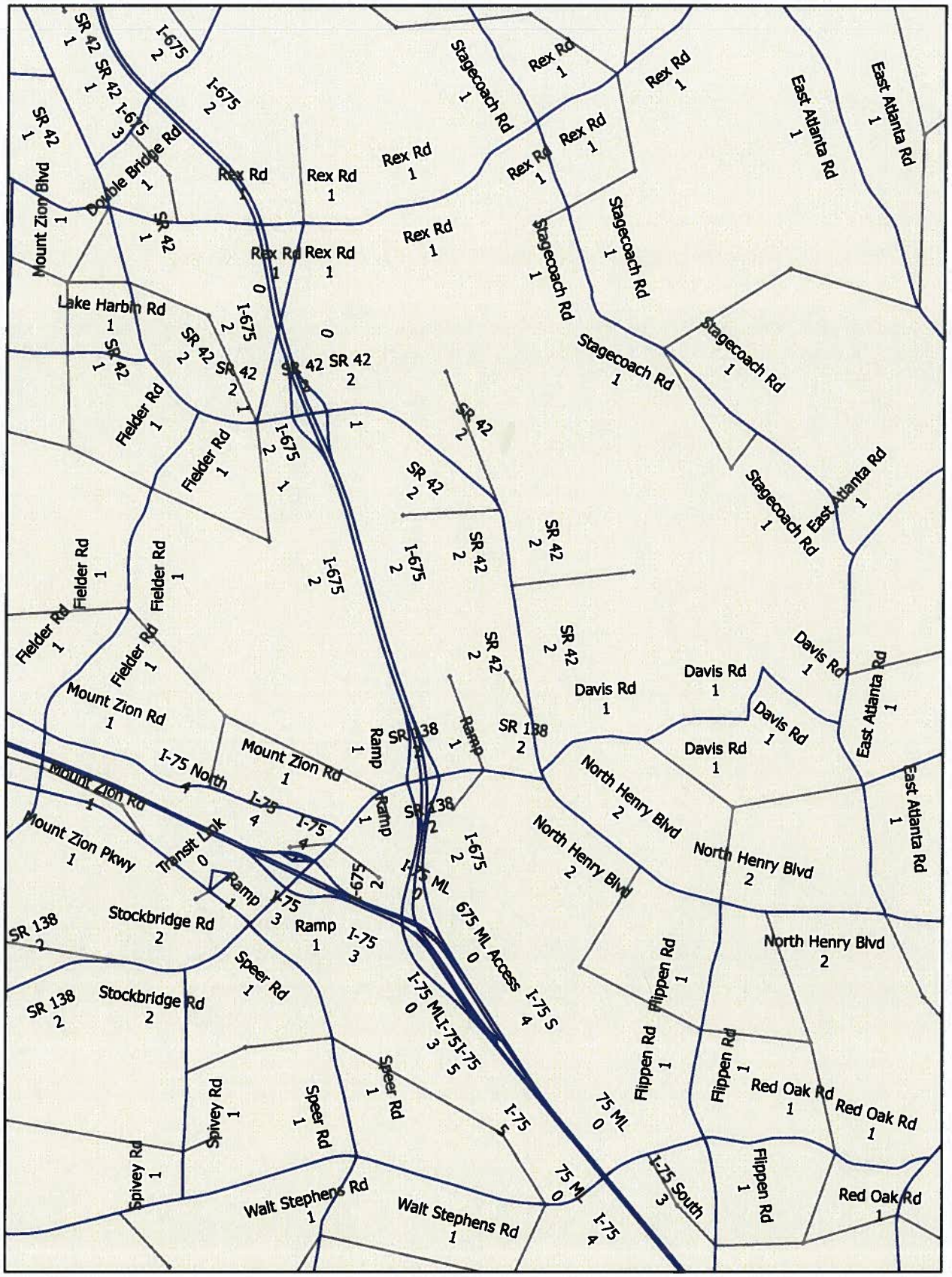
	Stream Impact	Buffer Impact
Impact Quantity	390 linear feet	21,000 square feet
Estimated Credits	1,776	531
Mitigation Cost	$57,000	$17,000
Total Mitigation Cost	$74,000	

If you have questions or need further assistance please contact me at 678.932.2228.

Sincerely,
Edwards Pitman

Josh Earhart
Sr. NEPA Analyst

Atlanta Regional Commission Travel-Demand Model
2024 Build Network Schematic - Thru Lanes
April 2016



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP00-0037-02(056) Clayton Henry
P.I. No.: 322050
SR 42/US 23 from SR 138 to I-675

OFFICE: Engineering Services

DATE: April 4, 2011

FROM: Ronald E. Wishon, State Project Review Engineer REW

TO: Bobby K. Hilliard, PE, State Program Delivery Engineer
Attn.: Charner Rodgers

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held January 24-27, 2011. Responses were received on March 23, 2011. Revised responses were received April 4, 2011. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
RD-1	Use 11 foot inside, 12 foot outside lanes throughout the project	$938,824	Yes	This will be done.
RD-3	Shorten tie on Old Macon Highway and eliminate the median opening	$614,684	No	Old Macon Hwy. carries heavy trucks from both the Waste Water Treatment Plant and a trailer truck storage area located near this intersection. Closing the median opening will cause these trucks to make U-turns at Sunset Hill Rd for SB vehicles or Valley Hill Road for NB vehicles. Neither intersection is currently designed for truck traffic U-turns. Due to the proximity of a townhome community at Sunset Hill, there is not adequate room to accommodate a truck U-turn.
RD-7	Construct a 12 foot urban shoulder	$2,954,842	No	With the adoption of 24"curb & gutter for this project, the minimum offset from the edge of travel way is 13½'. In accordance with ROW guidelines, a 2' offset is needed in order to provide the required clearance for the utility poles, resulting in a minimum 15½'shoulder.

RD-11	Use Modular Block Walls in lieu of poured in place GA Std. 4948-B Retaining walls	$225,394	Yes	This will be done for walls greater than 10 ft high, provided that the tie back does not interfere with underground utilities or pipes.
RD-12	Use GA Std. 9031-L Gravity walls in lieu of poured in place GA Std. 4948-B Retaining walls	$221,392	Yes	This will be done for walls less than 10 ft high, depending on the bearing capacity of the soil.
RD-15	Use a 4 inch concrete median thickness in lieu of 7 ½ inch	$246,092	Yes	This will be done.
RD-16	Remove and replace existing pavement to eliminate leveling in select areas	$579,921	Yes	This will be done.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved: _____ **Date:** 4-4-11

Gerald M. Ross, PE, Chief Engineer

REW/LLM
Attachments
c: Ben Buchan
Bobby Hilliard/Stanley Hill/Charner Rodgers
Paul Liles/Ben Rabun/Bill Duvall/Bill Ingalsbe
Funmi Adesesan
Lamar Pruitt/Mike England/Bill Rountree
Ken Werho
Nabil Raad
Lisa Myers
Matt Sanders

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE STP-037-2(56), Henry and Clayton Counties
SR 42/US23 from SR 138 to I-675
P.I. No.: 322050

OFFICE Program Delivery

DATE April 4, 2011

FROM Bobby K. Hilliard, P.E., State Program Delivery Engineer for S.H.

TO Ron Wishon, State Review Engineer
Attn: Lisa Myers

SUBJECT **Value Engineering Study Report Responses**

This Office has received and reviewed the Value Engineering Study Final Report dated February 9, 2011. The study has developed seven alternatives. Program Delivery concurs with The attached responses to the alternatives for the above referenced project. If there are questions or concerns, please contact the Project Manager, Charner L. Rodgers, at 404-631-1161.

S.H.
BKH: SH: CLR
Attachment: VE Responses from William Russell & Johnson

williams - russell and johnson, inc.

engineers ● planners ● architects

187 West Peachtree St, NW
Suite 500
Atlanta, Georgia 30308
Telephone (404) 853-6800
FAX (404) 607-8890

March 31, 2011
Charner Rodgers, Project Manager
Georgia Department of Transportation
600 West Peachtree Street
25th Floor
Atlanta, GA 30308

Subject: **Value Engineering Study**
STP-037-2(56) Henry and Clayton Counties
SR 42/US23 from SR 138 to I-675
P.I. No.: 322050

Ms. Rodgers:

The following are our responds to the VE items resulted from the study by PBS&J.

	VE item No.	Saving	Implement	Comments
RD-1	Use 11' inside lanes, 12' outside lanes throughout the project.	$938,824	Yes	SR42/US23 is classified as Urban Minor Arterial. The newly released GDOT "Design Policy Manual" dated 2/10/2011, does allow for 11 ft wide lane on this type of road classification. Design truck count percent is 6.5% for this project; therefore, maintaining a 12ft. wide outside lane is desirable.
RD-3	Shorten tie on the Old Macon Hwy. and eliminate the median opening.	$614,684	Not Recommended	Old Macon Hwy. carries heavy tracks from both the Waste Water Treatment Plant and a significant sized trailer truck storage area located near this intersection. Closing the median at the Old Macon Hwy. intersection will cause these heavy traffics to make "U" turn at either Sunset Hill Road for southbound traffics or at Valley Hill Road for the northbound traffics. Currently, both intersections are not designed for truck traffic "U" turn. Due to the proximity of a near by town home at the Sunset Hill Blvd., there is not enough room to accommodate a truck "U" at this intersection. Closing off the median opening at this intersection will encourage trucks traffic to travel into heavy

williams - russell and johnson, inc.

engineers ● planners ● architects

187 West Peachtree St, NW
Suite 500
Atlanta, Georgia 30308
Telephone (404) 853-6800
FAX (404) 607-8890

				residential area along Edward Rd. and Homestead Rd. which is not desirable. Curb & gutter can be used along this re-aligned Old Macon Hwy. to eliminate any potential impact on the existing cemetery.
RD-7	Use of 12' urban shoulder.	$2,954,842	Not Recommended.	In accordance with the GDOT "Design Policy Manual" all utility poles shall have 12ft minimum clearance (Table 5.2 – "Horizontal Clearances of Utilities Installation: Urban Shoulder") from the face of curb to the face of utility obstacle. With the adoption of 24" curb & gutter for this project, the minimum offset from the edge of travel way (lip of gutter) is 13ft-6in. Therefore, in accordance with the guide line for setting right-of-way, page 6-19 of the GDOT "Design Policy Manual", 2ft offset is required, resulting in 15ft-6in minimum shoulder.
RD-11	Use of modular block walls in-lieu of cast-in-place concrete cantilever wall.	$225,394	Yes. Use this type of wall with height greater than 10 ft.	Modular wall can be used for all retaining walls greater than 10ft high, provided that the tie back does not interfere with underground utilities or pipes.
RD-12	Use of gravity walls in-lieu of cast-in-place concrete cantilever wall.	$221,392	Yes. Use this type of wall with height less than 10 ft.	GDOT standard gravity retaining wall can be used for all retaining walls equal or less than 10ft high. The choice of using this type of retaining wall will also depend on the bearing capacity of soil on site due to the heavy mass of this type of wall.
RD-15	Use of 4" in-lieu of 71/2" concrete median for new median (not on existing pavement)	$246,092	Yes	This should be done

williams - russell and johnson, inc.

engineers ● planners ● architects

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Suite 500
Atlanta, Georgia 30308
Telephone (404) 853-6800
FAX (404) 607-8890

RD-16	Remove and replace existing pavement to eliminate leveling in selected area.	$579,921	Yes	This should be done

If you have any questions, please give me a call at 404-853-6874 or send an e-mail to ckong@wrjinc.com. Thank you.

Sincerely,

Clifford Kong

Clifford Kong, P.E.
Project Manager

cc: Stanley Hill, GDOT
Clint Parker, BSI

Crash Analysis Summary December 22, 2015 Revised

Georgia Department of Transportation
PI No. 322050
SR 42, from SR 138 in Henry County to I-675 in Clayton County

CRASH HISTORY

SR 42, from SR 138 in Henry County to I-675 in Clayton County, 2.35 miles

Year	Crashes	Crash Rate		Injuries	Injury Rate		Fatalities	Fatality Rate	
2011	67	587	(482)	43	377	(166)	0	0.00	(1.19)
2012	69	586	(544)	32	272	(183)	0	0.00	(1.16)
2013	102	842	(534)	48	396	(167)	0	0.00	(1.05)
2014	79	635	(604)	49	394	(183)	0	0.00	(1.14)

Note: All rates are per 100 million miles of travel. Numbers in parentheses are statewide average rates for **Urban Minor Artierial**.

Summary by Type, 2011-14

Type	Crashes	Injuries	Fatalities
Rear End	150	68	0
Angle	92	68	0
Sideswipe	22	7	0
Animal	21	2	0
Head On	10	19	0
Other-On Road	8	3	0
Object-Off Road	7	4	0
Other-Off Road	7	1	0
Pedestrian	0	0	0
Bicycle	0	0	0
Total	317	172	0

Summary by Light Conditions, 2011-14

Type	Crashes	Injuries	Fatalities
Daylight	211	116	0
Dark-Not Lighted	60	31	0
Dark-Lighted	28	13	0
Dusk	5	4	0
Dawn	13	8	0
Total	317	172	0

Summary by Intersecting Roadway, 2011-14

Type	Crashes	Injuries	Fatalities
I-675 Ramps	92	55	0
Valley Hill Road	68	44	0
SR 138	66	19	0
Davis Road	36	21	0
Daniel Drive	21	13	0
Old Macon Highway	12	12	0
Not at Intersection	12	6	0
Old Atlanta Road	10	2	0
Total	317	172	0

Department of Transportation
State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE STP00-0037-02(056)
Clayton/ Henry County, P.I. # 322050

OFFICE Planning

DATE September 9, 2015

FROM Cynthia L. VanDyke, State Transportation Planning Administrator

TO Albert Shelby, State Program Delivery Engineer
Attention: Kevin VanHouten

SUBJECT **Reviewed** Design Traffic for SR 42 from 138/ Henry to I-675 Clayton

As per your request, we reviewed the consultant's Design Traffic for the above project.

The Design Traffic is approved based on the information furnished. If you have any questions concerning this information please contact Daniel R. Funk at (404) 631-1959.

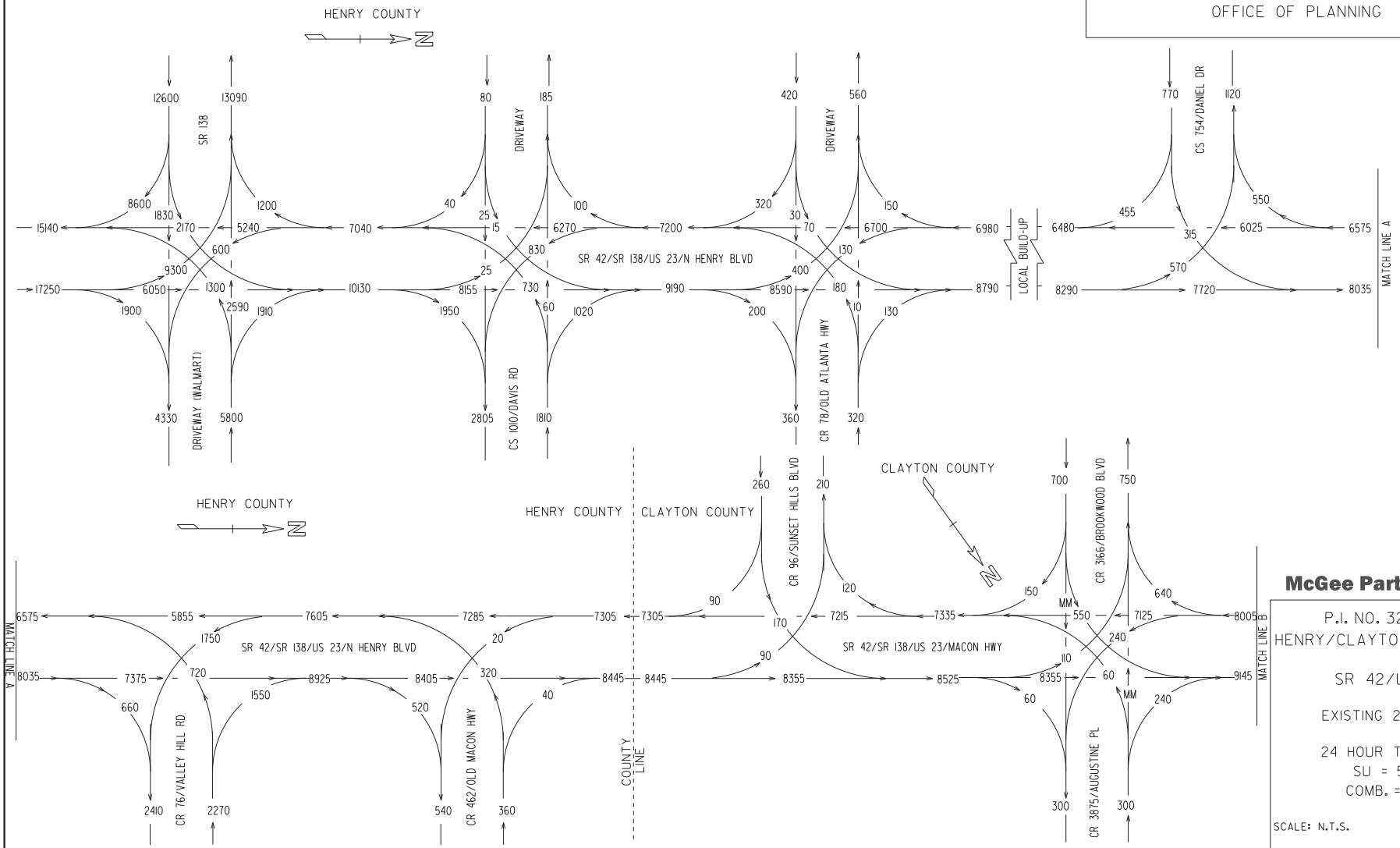
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STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	STP00-0037-02(056)		

SHEET 1 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
HENRY/CLAYTON COUNTIES

SR 42/US 23

EXISTING 2014 ADT

24 HOUR T = 7.0%
SU = 5.5%
COMB. = 1.5%

SCALE: N.T.S. TMC 04/2015

REVISION DATES

STATE OF GEORGIA
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OFFICE:

TRAFFIC DIAGRAM

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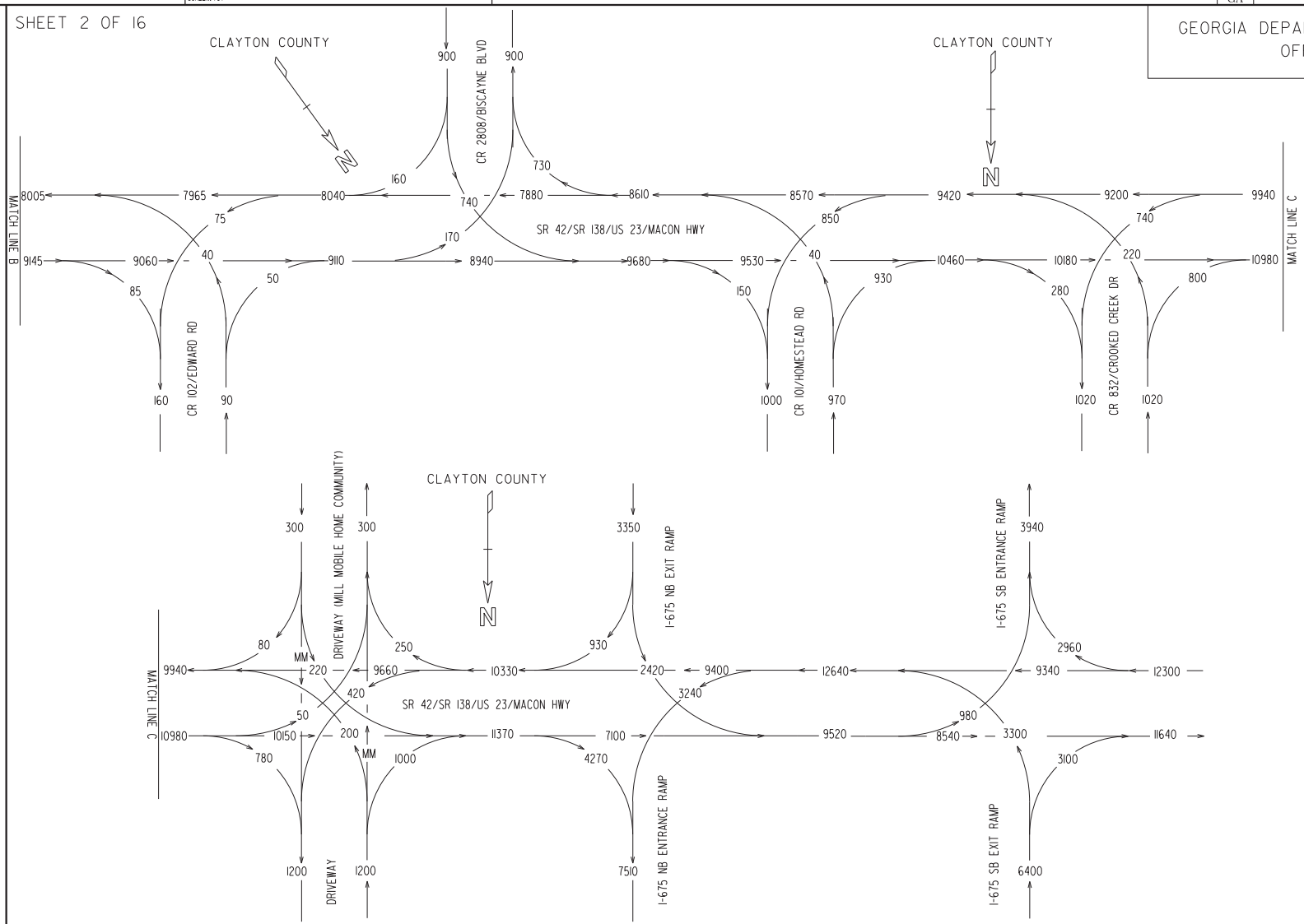
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04/11/13 COMBOR

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SHEET 2 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
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McGee Partners, Inc.

P.I. NO. 322050
HENRY/CLAYTON COUNTIES

SR 42/US 23

EXISTING 2014 ADT

24 HOUR T = 7.0%
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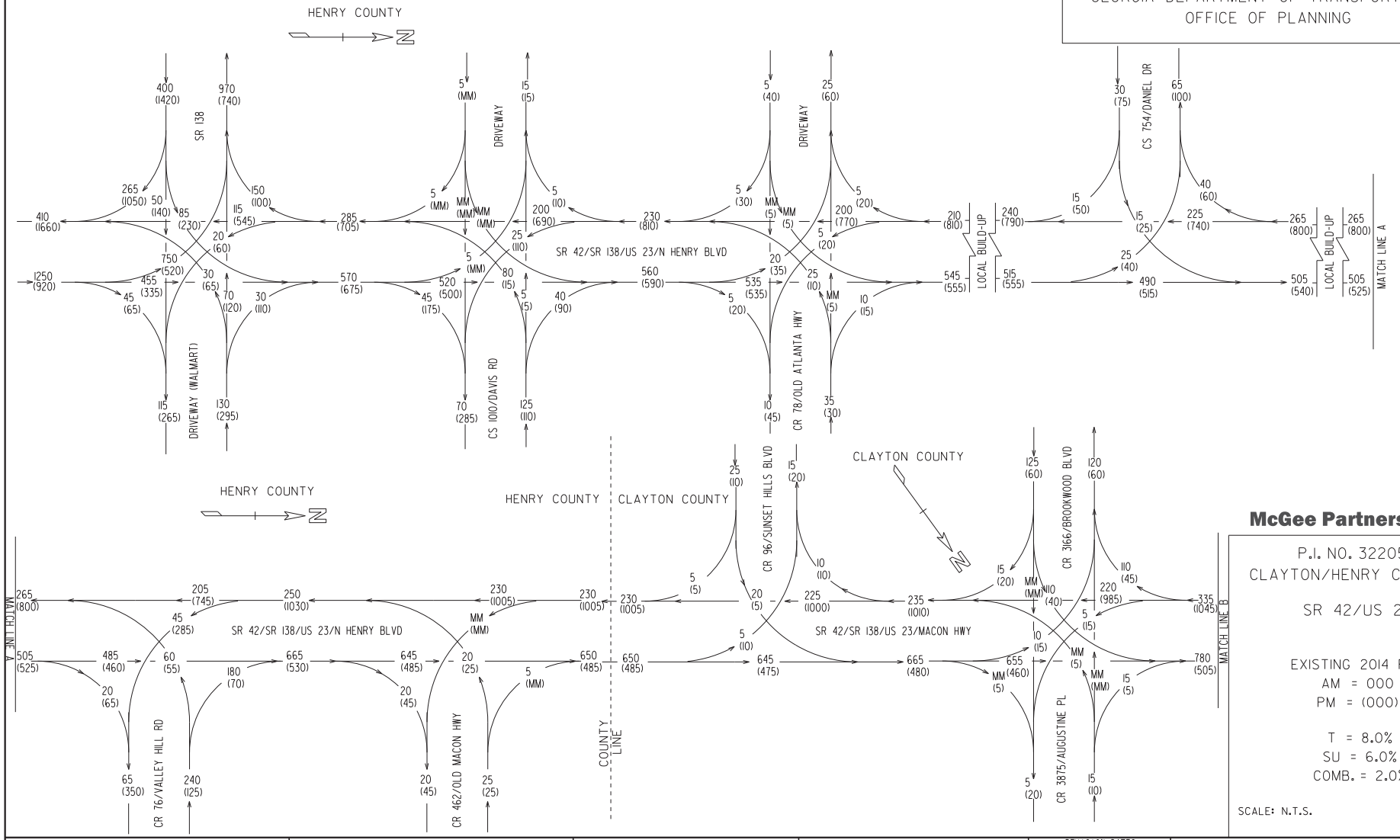
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				DRAWING No. 10-002

04/11/13 COMBOR

SHEET 3 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

EXISTING 2014 PHV
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PM = (000)

T = 8.0%
SU = 6.0%
COMB. = 2.0%

SCALE: N.T.S.

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04/2015

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DEPARTMENT OF TRANSPORTATION
OFFICE:

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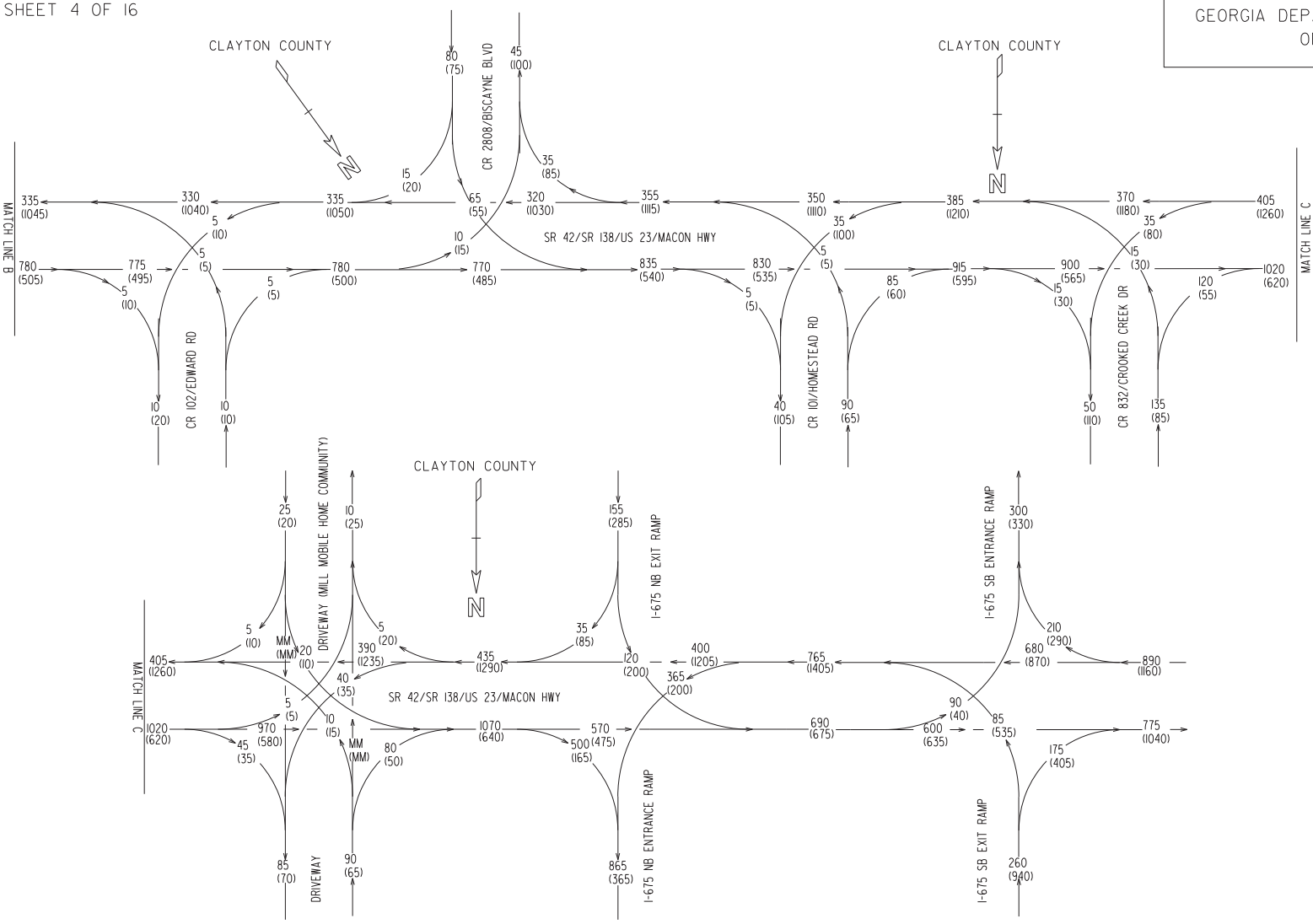
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SHEET 4 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



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CLAYTON/HENRY COUNTIES

SR 42/US 23

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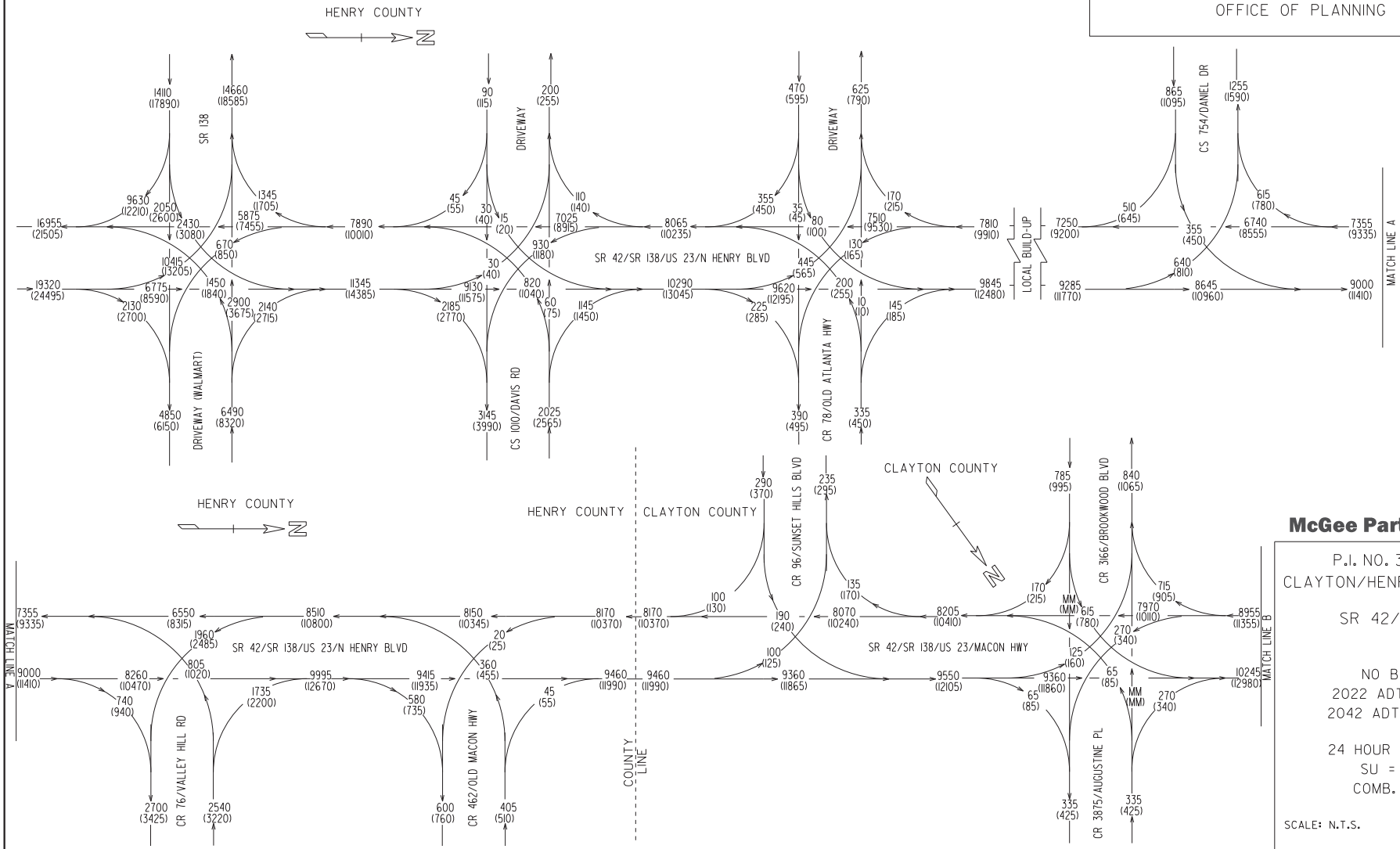
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SHEET 5 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

NO BUILD
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2042 ADT = (000)

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SU = 5.5%
COMB. = 1.5%

SCALE: N.T.S.

TMC
04/2015

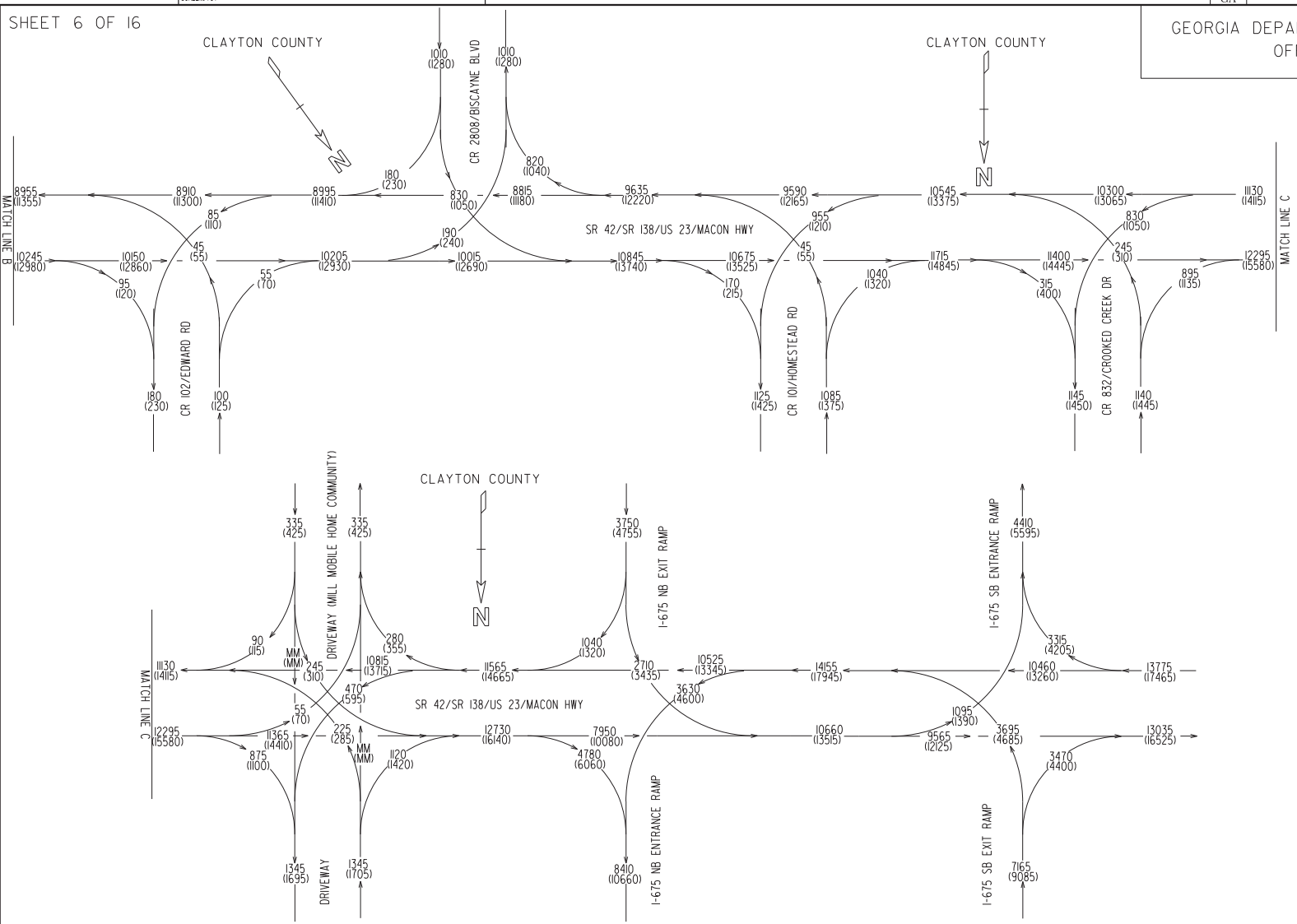
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SHEET 6 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

NO BUILD
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24 HOUR T = 7.0%
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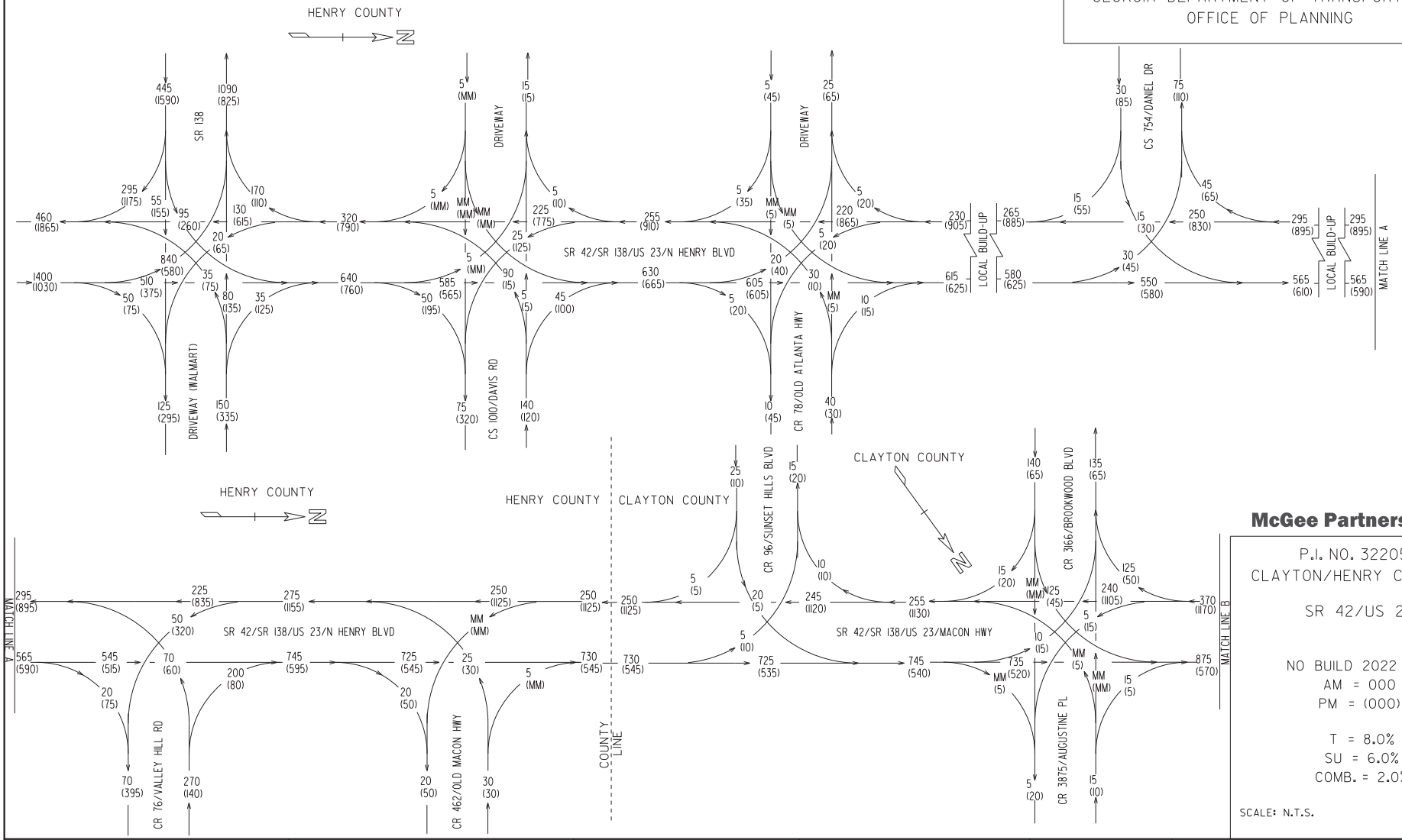
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04/11/13 CONBOR

SHEET 7 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

NO BUILD 2022 DHV
AM = 000
PM = (000)

T = 8.0%
SU = 6.0%
COMB. = 2.0%

SCALE: N.T.S.

TMC
04/2015

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

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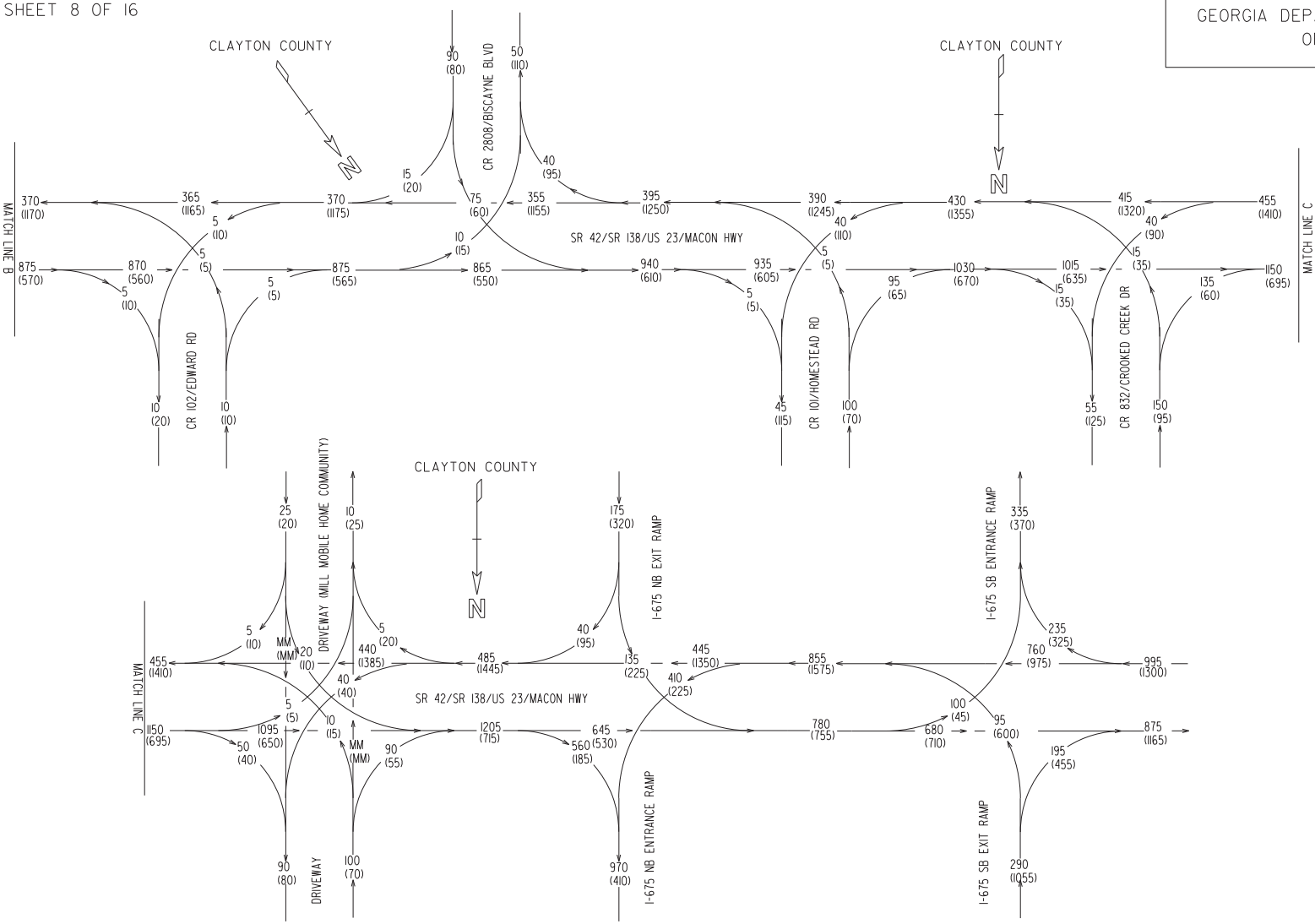
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04/11/13 CONBOR

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SHEET 8 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

NO BUILD 2022 DHV
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PM = (000)

T = 8.0%
SU = 6.0%
COMB. = 2.0%

SCALE: N.T.S.

TMC
04/2015

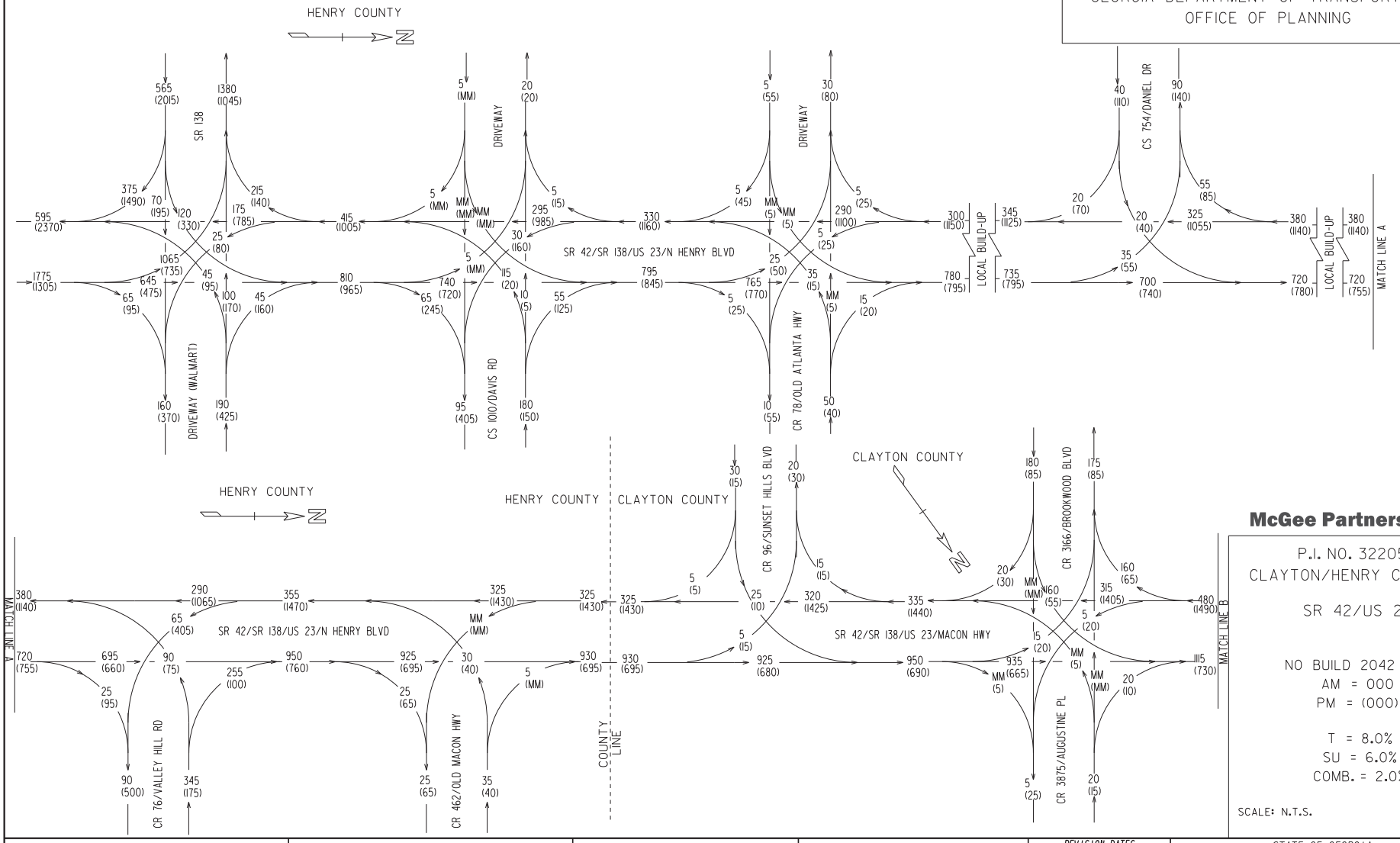
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SHEET 9 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

NO BUILD 2042 DHV
AM = 000
PM = (000)

T = 8.0%
SU = 6.0%
COMB. = 2.0%

SCALE: N.T.S.

TMC
04/2015

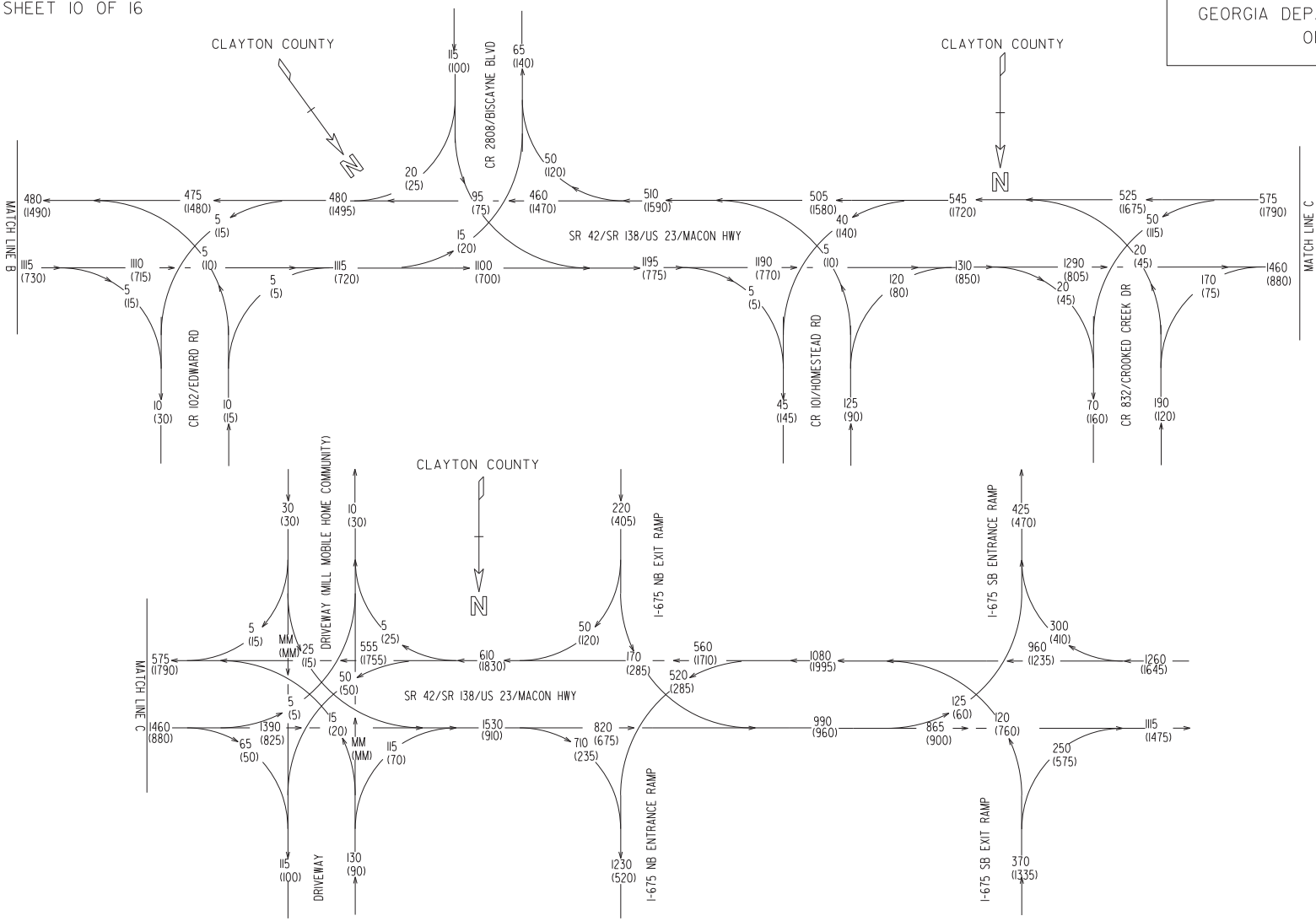
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SHEET 10 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
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McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

NO BUILD 2042 DHV
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PM = (000)

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SU = 6.0%
COMB. = 2.0%

SCALE: N.T.S.

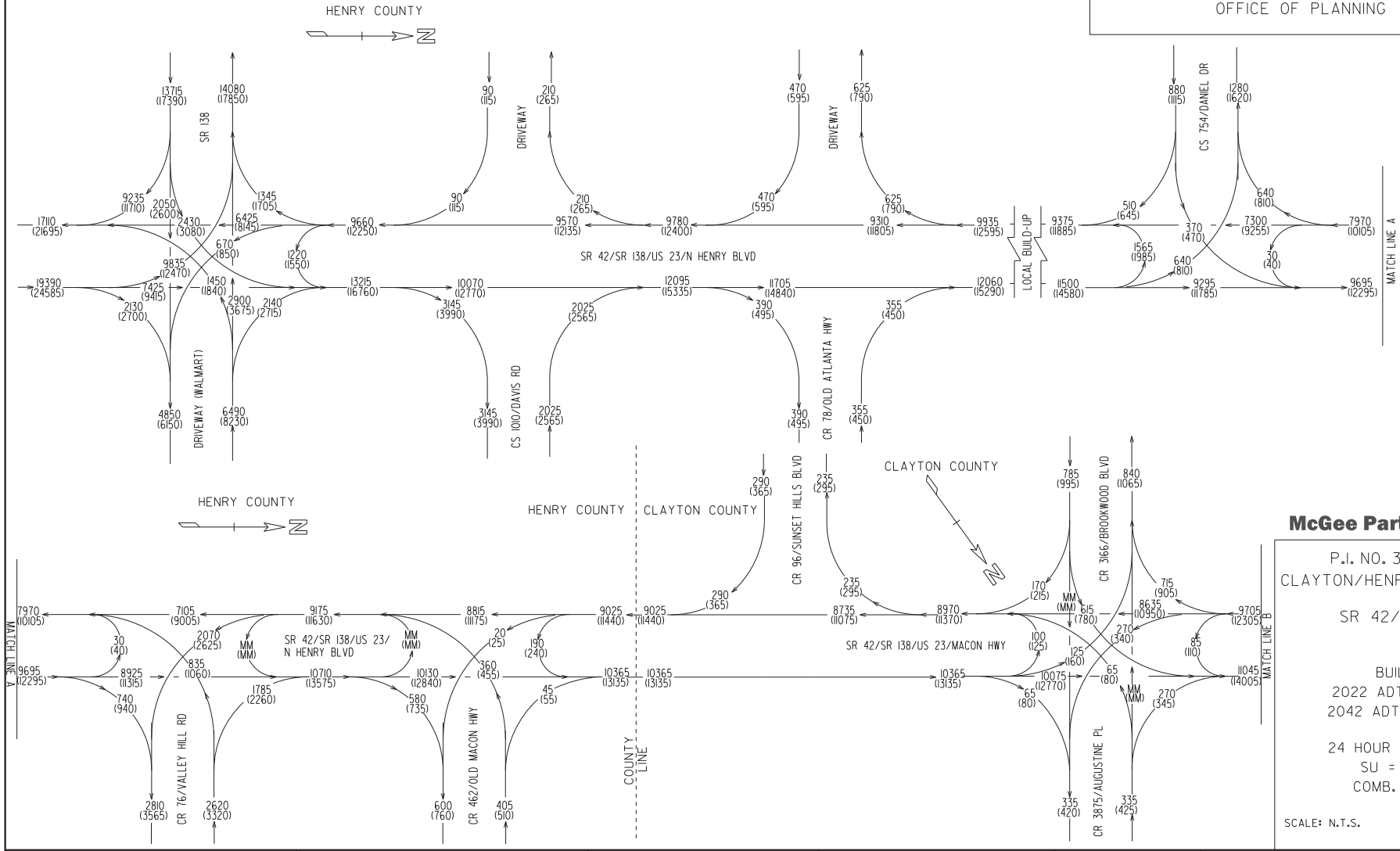
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				TRAFFIC DIAGRAM
				DRAWING No. 10-010

04/11/13 CONBOR

SHEET 11 OF 16

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McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

BUILD
2022 ADT = 000
2042 ADT = (000)

24 HOUR T = 7.0%
SU = 5.5%
COMB. = 1.5%

SCALE: N.T.S.

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04/2015

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OFFICE:

TRAFFIC DIAGRAM

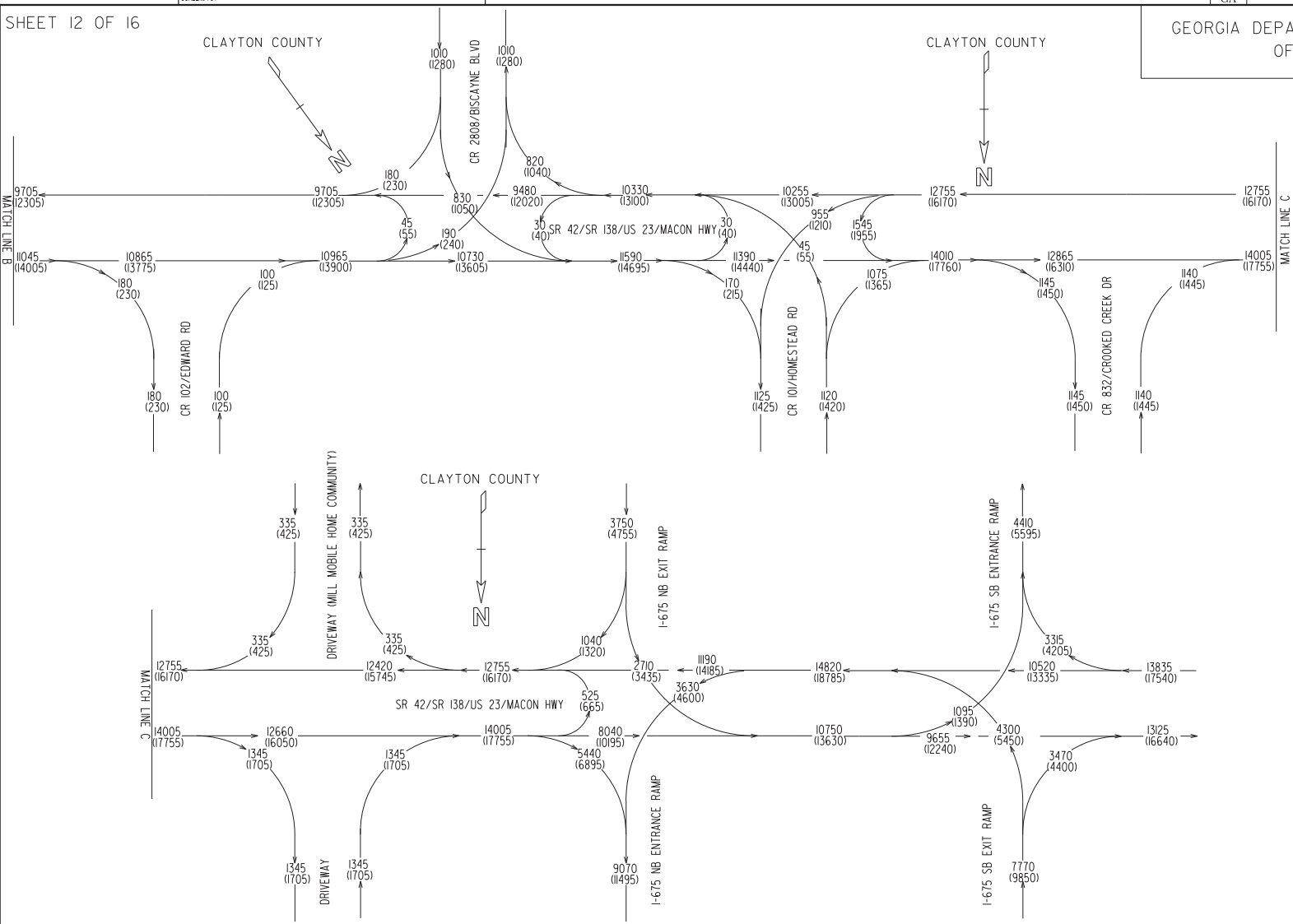
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SHEET 12 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
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McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

BUILD
2022 ADT = 000
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TMC
04/2015

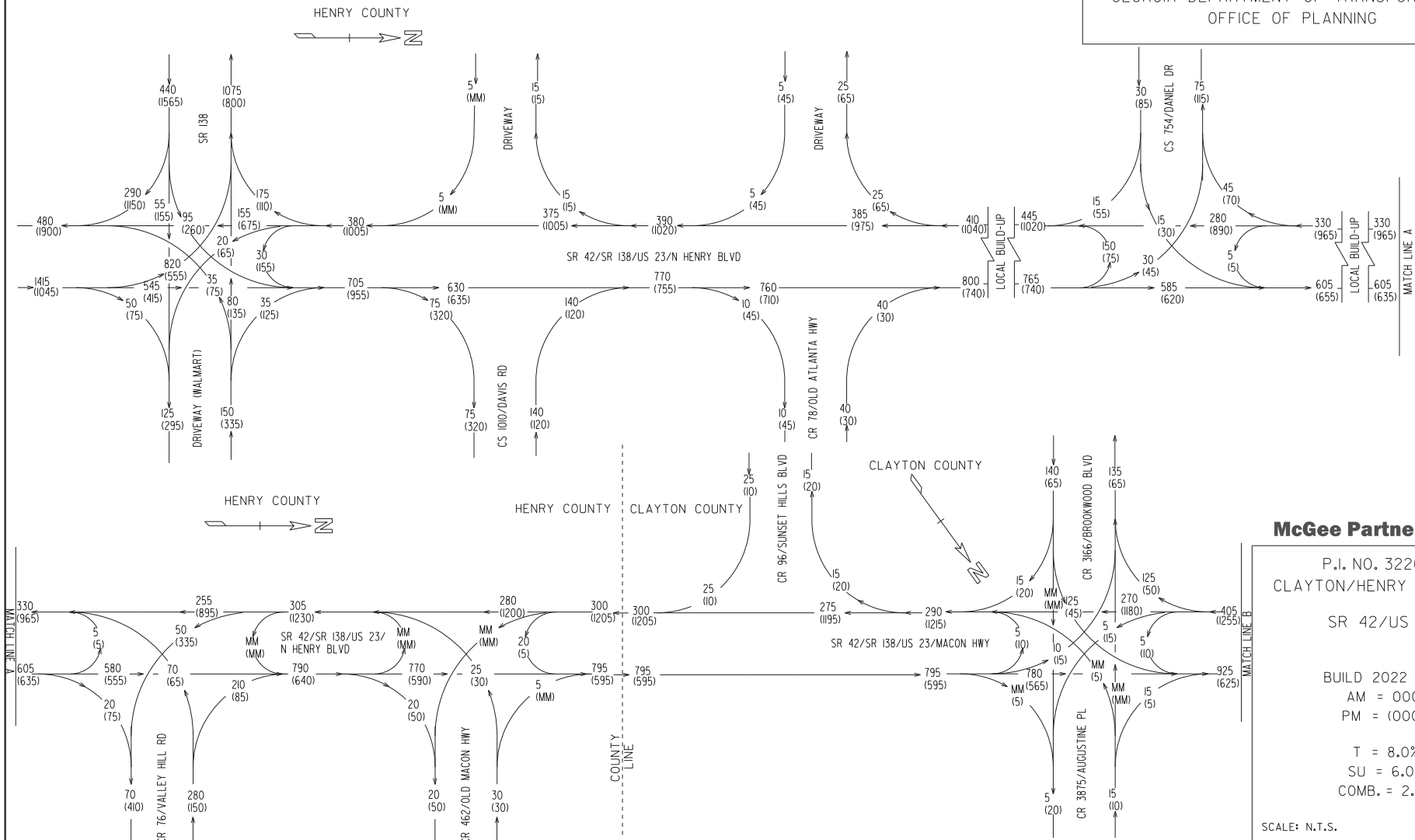
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SHEET 13 OF 16

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P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

BUILD 2022 DHV
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SU = 6.0%
COMB. = 2.0%

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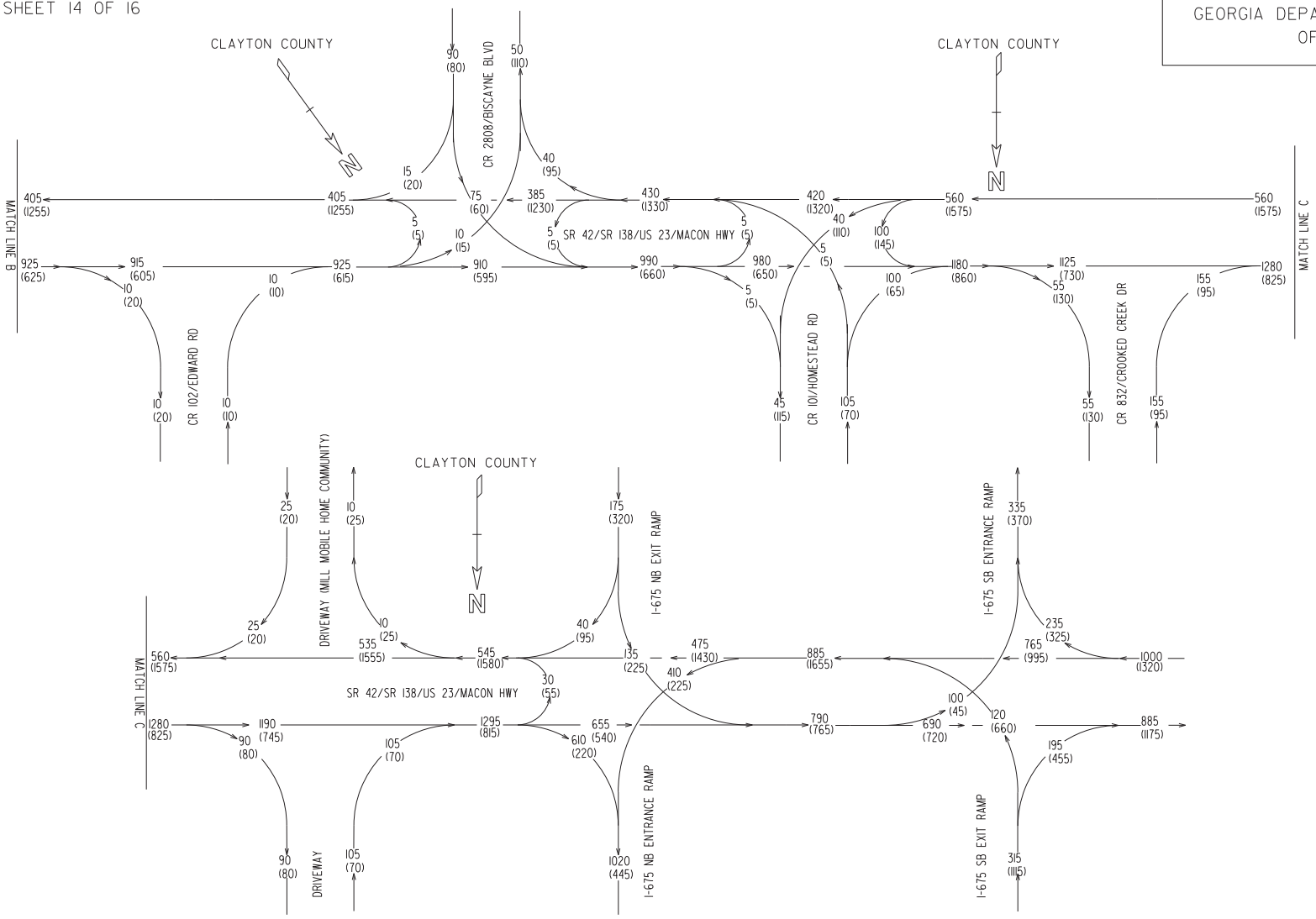
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SHEET 14 OF 16

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CLAYTON/HENRY COUNTIES

SR 42/US 23

BUILD 2022 DHV
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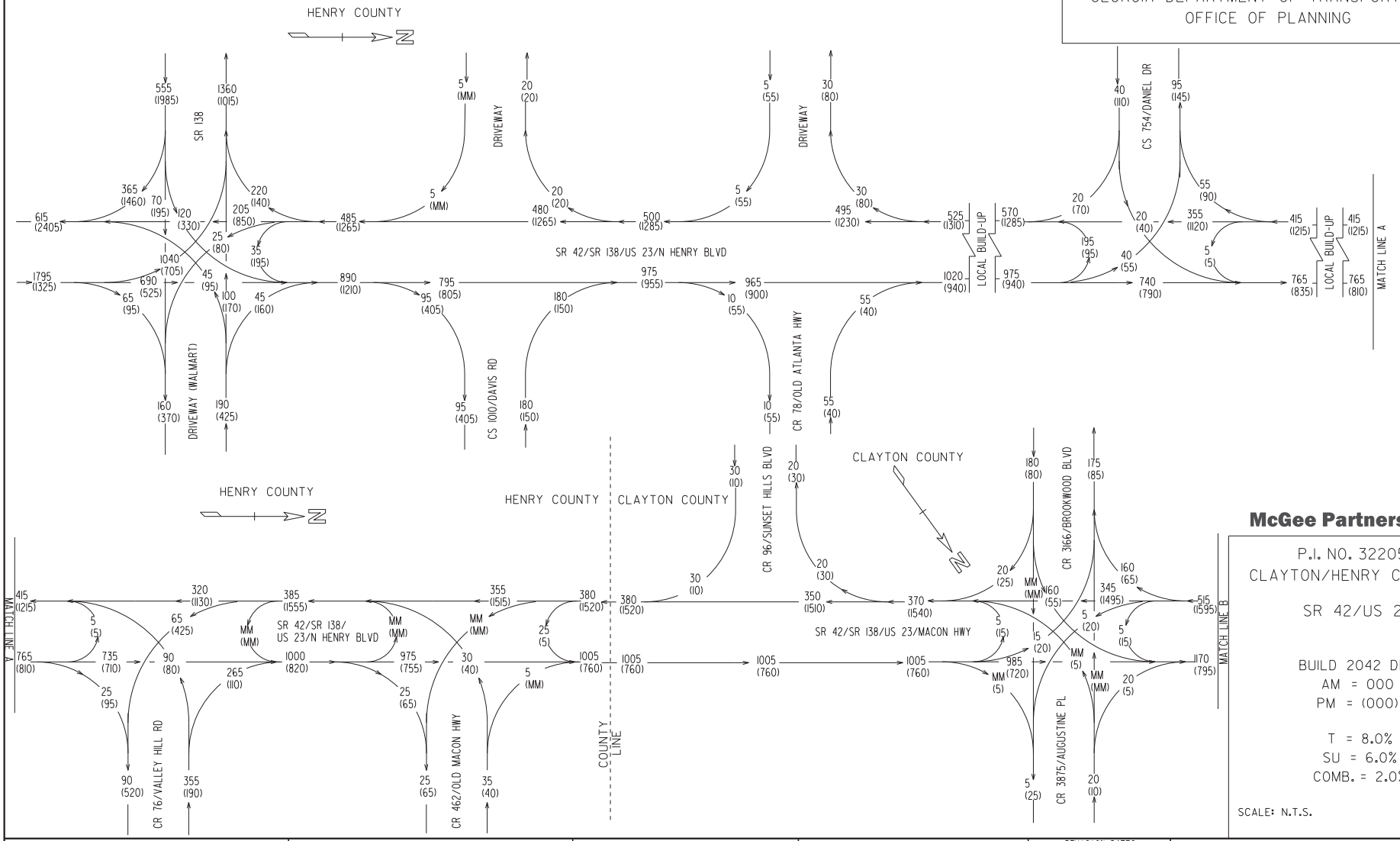
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SHEET 15 OF 16

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P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

BUILD 2042 DHV
AM = 000
PM = (000)

T = 8.0%
SU = 6.0%
COMB. = 2.0%

SCALE: N.T.S.

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

DRAWING No. 10-015

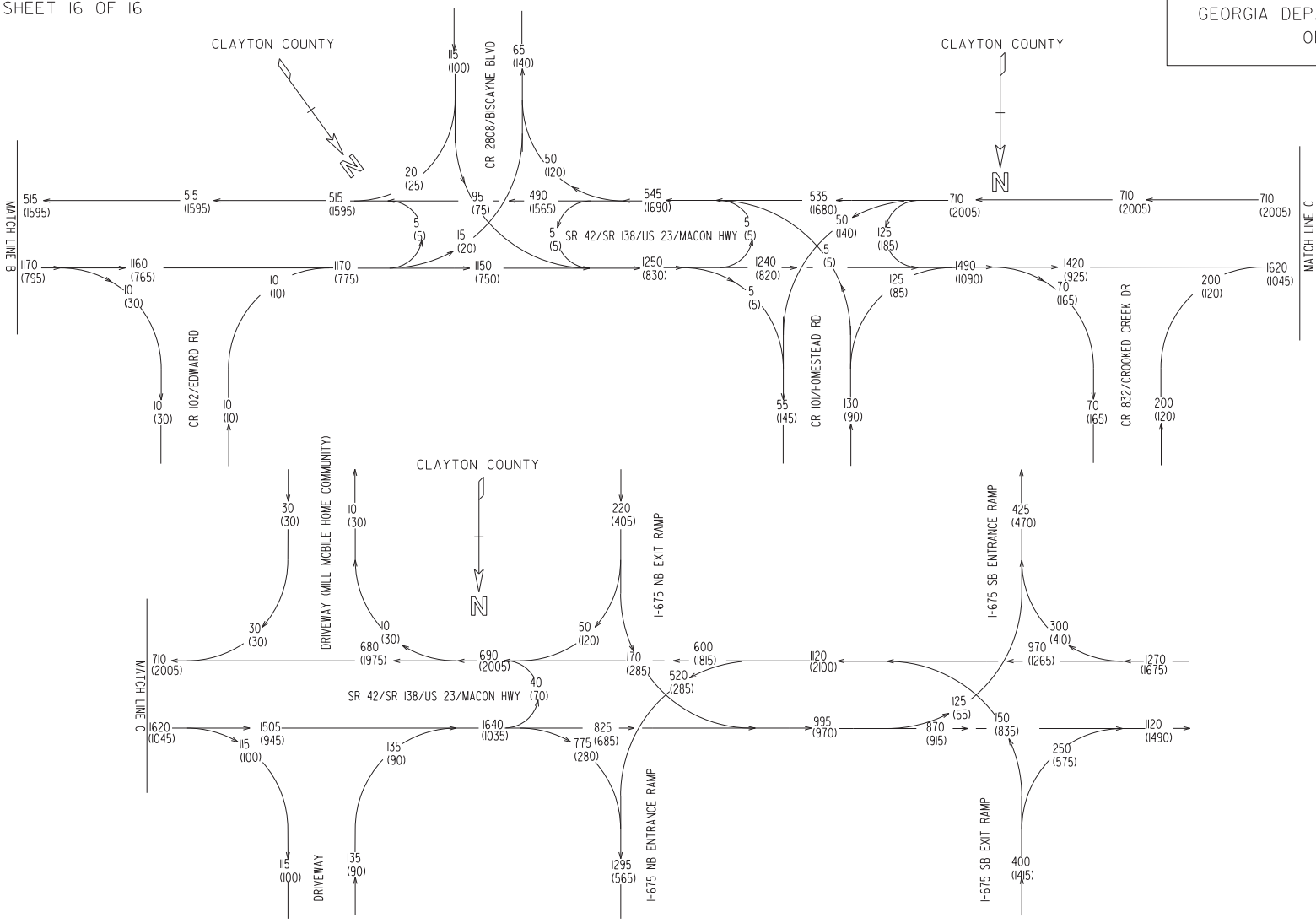
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04/11/13 CONBOR

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SHEET 16 OF 16

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



McGee Partners, Inc.

P.I. NO. 322050
CLAYTON/HENRY COUNTIES

SR 42/US 23

BUILD 2042 DHV
AM = 000
PM = (000)

T = 8.0%
SU = 6.0%
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04/11/13 CONBOR

P.I. Number: 322050
County: Clayton, Henry

A traffic study was performed to analyze the operational improvements of a proposed widening of SR 42/US 23 from south of SR 138 in Henry County to I-675 in Clayton County, P.I. No. 322050. The analysis considered the impact of increased traffic on the Build and No Build alternatives, as well as the possible inclusion of restricted crossing U-turn (RCUT) intersections. The analysis utilized traffic projections for the project, which were approved by GDOT on September 9, 2015.

The basic steps followed to perform the analysis were:

- Analyze segments along SR 42 both inside and outside of the project limits to determine level of service in accordance with Chapter 14 – Multilane Highways and Chapter 15 – Two-Lane Highways of the Transportation Research Board's (TRB) *Highway Capacity Manual, 2010 Edition (HCM)*.
- Analyze the existing signalized intersections to determine level of service in accordance with Chapter 18 – Signalized Intersections of the *HCM*.
- Adjust the approved traffic volumes to represent a corridor with RCUT and median U-turn (MUT) intersections.
- Investigate major RCUT and MUT intersections for signalization utilizing Warrant 1 from FHWA's *Manual on Uniform Traffic Control Devices (MUTCD)*.
- Analyze major RCUT and MUT intersections to determine level of service in accordance with Chapter 18 – Signalized Intersections and Chapter 19 – Two-Way Stop-Controlled Intersections of the *HCM*.

Segment Analysis

Table 1 shows the SR 42 segment analysis. It demonstrates the improvement on future traffic operations by building additional capacity.

Table 1: HCM Multilane and Two-Lane Highway Analysis

Location	Segment	Peak	2014 Exist	2022 No Build	2022 Build	2042 No Build	2042 Build
North of the Project Limits	I-675 to Lake Harbin Rd	AM	B	B	B	B	B
		PM	B	B	B	C	C
Project Limits	Valley Hill Rd to I-675	AM	D	D	B	E	B
		PM	E	E	B	F	C
	SR 138 to Valley Hill Rd	AM	C	C	A	D	B
		PM	D	D	B	E	B
South of the Project Limits	Flippen Rd to SR 138	AM	B	B	B	C	C
		PM	C	C	C	D	D

Signalized Intersection Analysis

Table 2 shows the performance of the existing signalized intersections, if operated as traditional intersections instead of RCUTs.

Table 2: HCM Signalized Intersection Analysis (LOS/Delay (s))

Intersection	Peak	2014 Exist	2022 No Build	2022 Build	2042 No Build	2042 Build
I-675 SB	AM	B (14.3)	B (18.6)	B (19.2)	C (20.1)	C (22.5)
	PM	C (28.3)	C (29.3)	C (32.2)	D (46.2)	D (51.0)
I-675 NB	AM	B (12.3)	C (23.1)	C (27.9)	C (34.8)	D (53.5)
	PM	B (13.1)	B (17.7)	C (27.8)	C (20.9)	C (21.4)
Valley Hill Rd	AM	B (19.4)	C (20.5)	B (18.4)	C (24.3)	C (20.0)
	PM	A (9.4)	B (10.6)	A (8.6)	B (16.6)	B (10.6)
SR 138	AM	D (37.3)	D (41.4)	D (38.1)	D (51.2)	D (44.6)
	PM	D (50.9)	E (70.8)	E (56.8)	F (166.8)	F (118.8)

RCUT and MUT Analysis

In coordination with GDOT traffic operations staff, the attached schematic layout was developed depicting a series of RCUT and MUT intersections along SR 42 between SR 138 and I-675. Table 3 summarizes the signal warrants for movements at the proposed major RCUT and MUT intersections. None of the movements meet Warrant 1, Eight-Hour Vehicular Volume at 100%; however, the left/U-turn movement for Davis Road, Daniel Drive, Valley Hill Drive and the U-turn movement south of Homestead Road meet at 70%.

Table 3: Signal Warrant Summary for RCUT and MUT Intersections

		Warrant 1A		Warrant 1B		Combined Warrant 1A & 1B		Warrant 1A		Warrant 1B		Combined Warrant 1A & 1B	
		100%		100%		80%		70%		70%		56%	
Side Road	Movement	Left+U Turns	Opposing	Left+U Turns	Opposing			Left+U Turns	Opposing	Left+U Turns	Opposing		
Davis Road	SB SR 42 Left/U-Turn	No		No		No		No		**Yes**		**Yes**	
Daniel Drive	NB SR 42 Left/U-Turn	No		No		No		**Yes**		No		No	
Daniel Drive	SB SR 42 U-Turn	No		No		No		No		No		No	
Valley Hill Drive	NB SR 42 U-Turn	No		No		No		No		No		No	
Valley Hill Drive	SB SR 42 Left/U-Turn	No		No		No		**Yes**		No		**Yes**	
Sunset Hills Blvd	NB SR 42 Left/U-Turn	No		No		No		No		No		No	
Brookwood Blvd	NB SR 42 Left/U-Turn	No		No		No		No		No		No	
Augustine Place	SB SR 42 Left/U-Turn	No		No		No		No		No		No	
S of Homestead Road	NB SR 42 U-Turn	No		No		No		No		No		No	
S of Homestead Road	SB SR 42 U-Turn	No		No		No		**Yes**		**Yes**		**Yes**	
Driveway (The Mill)	NB SR 42 Left/U-Turn	No		No		No		No		No		No	
Driveway (Valero)	SB SR 42 Left/U-Turn	No		No		No		No		No		No	

Table 4 summarizes the performance of movements at the proposed major RCUT and MUT intersections. Those intersections possibly warranting signalization are also analyzed as signalized.

Table 4: RCUT and MUT Intersection Traffic Analysis

Intersection Movement	2022				2042			
	AM		PM		AM		PM	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Unsignalized (*Movement warrants signalization)								
Davis Road								
* SB SR 42 Left/U-Turn	A	(9.5)	B	(10.9)	B	(10.4)	B	(13.4)
Daniel Drive								
* NB SR 42 Left/U-Turn	B	(10.0)	C	(20.6)	B	(11.5)	F	(52.7)
SB SR 42 U-Turn	B	(11.8)	B	(13.5)	B	(14.1)	C	(15.3)
Valley Hill Road								
NB SR 42 U-Turn	A	(9.3)	C	(17.3)	B	(10.0)	C	(24.8)
* SB SR 42 Left/U-Turn	A	(9.1)	B	(11.6)	B	(11.5)	C	(17.0)
Sunset Hills Blvd								
NB SR 42 Left/U-Turn	A	(9.0)	C	(23.5)	A	(9.7)	E	(46.0)
Brookwood Blvd/Augustine Place								
NB SR 42 Left/U-Turn	A	(8.3)	B	(12.6)	A	(9.3)	C	(22.7)
SB SR 42 Left/U-Turn	C	(20.1)	B	(12.7)	E	(38.9)	C	(16.4)
South of Homestead Road								
NB SR 42 U-Turn	B	(10.1)	D	(30.6)	B	(11.3)	F	(63.1)
* SB SR 42 U-Turn	C	(24.7)	C	(18.6)	F	(61.2)	E	(43.5)
Driveways (The Mill/Valero)								
NB SR 42 Left/U-Turn	B	(10.5)	E	(48.0)	B	(12.0)	F	(212.8)
SB SR 42 Left/U-Turn	C	(15.2)	B	(10.4)	D	(29.8)	B	(12.9)
Signalized								
Davis Road								
SB SR 42 Left/U-Turn	A	(0.6)	A	(0.7)	A	(0.7)	A	(0.9)
NB SR 42 Thru	A	(1.4)	A	(1.9)	A	(1.7)	A	(2.0)
Daniel Drive								
NB SR 42 Left/U-Turn	A	(0.6)	A	(1.0)	A	(0.6)	A	(1.5)
SB SR 42 Thru	A	(1.6)	A	(2.2)	A	(1.6)	A	(2.5)
Valley Hill Road								
SB SR 42 Left/U-Turn	A	(0.6)	A	(0.9)	A	(0.7)	A	(1.7)
NB SR 42 Thru	A	(1.7)	A	(1.8)	A	(1.9)	A	(2.1)
South of Homestead Road								
SB SR 42 U-Turn	A	(1.1)	A	(0.8)	A	(1.8)	A	(1.3)
NB SR 42 Thru	A	(2.3)	A	(1.9)	A	(2.8)	A	(2.1)

It is recommended to consider the inclusion of traffic signals at the RCUT intersection at Daniels Drive and MUT intersection south of Homestead Road.

EXISTING SIGNAL TO REMAIN

RCUT INTERSECTION – STOP CONTROL

RCUT INTERSECTION – SIGNAL CONTROL

U-TURN CROSSOVER

SIGNALIZED U-TURN CROSSOVER

BEGIN PROJECT

END PROJECT

SR 42/138

SR 138

SR 42

SR 42

I-675

VALLEY HILL ROAD

HOMESTEAD ROAD

N

P.I. 322050
HENRY/CLAYTON COUNTIES
RCUT CORRIDOR SCHEMATIC

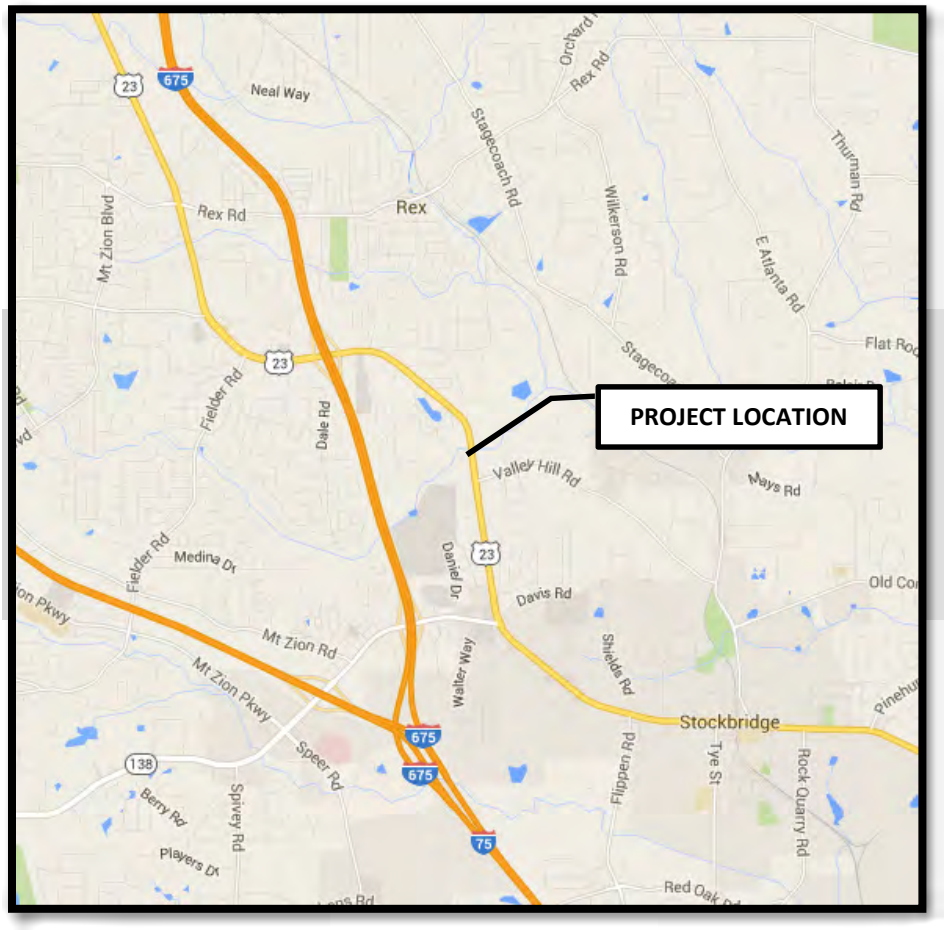
MARCH 24, 2016

ULICK ENGINEERING, LLC

SR 42 from SR138 to I-675
Concept Design - MS4 Stormwater Summary Report

Introduction

The SR 42 roadway segment from SR138 to I-675 encompasses approximately 2.5 miles and is located in both Henry and Clayton Counties, just northeast of the I-75/I-675 interchange. The existing roadway corridor consists mostly of a 2-lane roadway with a rural shoulder section and some sections in the more developed portions are 4-lane with curb and gutter. The proposed project, as outlined in the Concept Report, includes widening and the addition or curb and gutter and sidewalks.



MS4 Compliance

The SR42 from SR138/Henry to I-675/Clayton Project resides in an NPDES designated MS4 (Municipal Separate Storm Sewer Systems) area. Due to the increased stormwater requirements for projects in these zones, it is important that stormwater is evaluated early in the design process as it could affect right-of-way, typical sections, cost, and environmental aspects of the project. As part of this design phase, a concept level hydrology study was performed to size stormwater facilities in an effort to determine

possible right-of-way needs and to provide a rough cost estimate. GDOT MS4 Guidelines will be followed for the stormwater design and MS4 compliance on this project in accordance with the GDOT Manual on Drainage Design for Highways.

An initial site visit has been performed and data has been collected to begin the hydrology study. Existing and proposed drainage basins, impervious areas, and time of concentrations have been calculated and preliminary stormwater management facilities have been sized, but will need to be refined as the design progresses and as additional survey data is available. This report provides a summary of the findings at this time and also includes notes as to where infeasibility is anticipated. During preliminary design, more detailed calculations and details will be developed to show MS4 compliance on the project, along with an MS4 Infeasibility & Outfall Level Exclusion Report.

Existing Conditions

There are twenty-five (25) outfalls along the existing roadway corridor. Generally, each end of the project limits is a high point, with the road sloping down to Panther Creek near the middle of the project roadway corridor. Following is a brief summary of the existing basins. A more detailed explanation will be provided during subsequent design phases with the final stormwater report. Drainage maps are included with this report on sheets STORM-001 to STORM-006 showing the locations of each of the outfalls described below.

Basins 1 - 2 are the western most basins of the subject roadway beginning near Davidson Parkway and extending to Davis Road. These basins are heavily developed and stormwater runoff is from roadway drainage and commercial development. These basins outfall into a closed drainage system. It appears that this closed drainage system ties into or just downstream of a series of ponds located behind the Walmart shopping development. Additional survey and data gathering will be required to confirm the downstream outfall point. Since the basins outfall to a closed drainage system, slight increases of flow are not anticipated to have significant adverse impacts downstream.

Basins 3 - 8 begins near Davis Road and extends to just south of Valley Hill Road. These basins contain a mix of roadway, commercial development, residential areas, and wooded areas and ultimately outfall into a tributary to Panther Creek. This tributary has steep slopes, an existing dam, and a detention pond that has evidence of a high level of flow and a high level of debris. Given the sensitivity of an existing dam and other features of that tributary, the design team feels that it is critical, regardless of feasibility, to keep the flow to those areas the same or less than existing conditions flow.



Pond at Downstream End of Basins 3-8

Basins 9 – 17 encompasses SR42 from just south of Valley hill road to the Sunset Hill subdivision and these basins outfall just upstream of Panther Creek. These basins are less developed with a lot of wooded areas. The basin outfalls flow through overland flow and ditches in the wooded areas directly into the Panther Creek floodplain. There is an existing residential area located in a portion of the floodplain and the drainage patterns in that area are unclear. This will be further reviewed in subsequent design phases. It shall be noted that Panther Creek is a greater than 5 sq. mile basin at the crossing of SR42, which means that the existing stormwater flows in this area are small relative to the flows in the downstream creek. Therefore, increases in these existing flows would be anticipated to have no significant adverse impacts downstream.


Panther Creek Outfall

Basins 18 – 22 are located north of Basin 17 along SR 42 and outfall on the west side of SR42 into a series of pipes, ditches, and ponds that flow behind the commercial development and adjacent to a residential area. These basins combine and ultimately outfall into Panther Creek after sitting in a low area adjacent to a the Sunset Hills residential subdivision. There is a significant amount of debris present in the downstream ponds. The upstream contributing areas are a combination of residential and commercial properties with some wooded areas as well. Any increases in flow in this area would have to be analyzed closely to ensure no adverse impacts to the downstream residences, which are located fairly close to waterways with what appears to be minimal freeboard during a flood condition.


Low Area Downstream of Basins 18-22

Basins 23-25 are the northern most watersheds on the project. These basins outfall to the ditches that run parallel to the I-675 ramps. These existing basins contain mostly roadway runoff with some commercial development also contributing to the runoff. Since the existing outfall ditches are fairly large and in mostly wooded areas, increases in flow are not anticipated to have a significant adverse impact downstream. Additional field investigation and possibly supplemental survey will be required to provide a more detailed analysis of these basins.

Proposed Conditions - MS4 Stormwater Approach

The SR42 Road corridor is being widened with sidewalks being added to both sides of the road. The proposed project results in >5,000sf net change in impervious area and a disturbance of greater than 1 acre; therefore, this project must comply with the GDOT MS4 stormwater requirements. The design team has reviewed the basins listed above and developed a concept level MS4 Stormwater Plan to provide water quality, channel protection, overbank flood protection, and extreme flood protection where required and where feasible. This section provides a brief summary of the proposed basins and MS4 compliance options for treating the new pavement resulting from the project.

For a project such as this one, stormwater ponds provide the most effective treatment because they are dual-purpose BMPs meeting both stormwater quantity and quality control. Where possible, stormwater ponds were the option analyzed for treatment to minimize construction and maintenance costs. In other areas where traditional stormwater ponds are not feasible due to limited right-of-way, other options such as bioretention areas and enhanced swales were considered.

Basins 1 – 2 result in a minimal net change in the impervious area to the basin outfalls. Since there is very little increase in impervious area, the changes in flow are minimal. The project discharges into a closed drainage system and these minimal increases in flow are expected to have no significant impact on that downstream system. A detailed downstream analysis will be prepared during subsequent design phases to confirm no adverse impacts downstream.

Basin 3 has very little increase in impervious area, mostly resulting from the addition of sidewalk and a small area of road widening. This basin has increases in flow of about 2-3cfs so a BMP was analyzed to provide water quality treatment and mitigate the increase in flow. Due to the limited area available, and the fact that the BMP will be adjacent to the sidewalk, a bioretention area is anticipated to be the best solution. This will be further reviewed during subsequent design phases for feasibility and other BMPs will also be considered if needed.

Basin 4 has a significant increase in impervious area and, therefore, is anticipated to result in considerable increases in flow. There is an existing dam located just downstream of the outfall at Basin 4. The design team feels it is critical to show a decrease in flow at this point, and, therefore, recommends a stormwater pond be constructed to provide water quality and decrease flows. Even if this is cost infeasible, it is recommended to at least provide detention in this basin. Another option considered would be to pipe this flow down to Panther Creek to minimize the flow going to the existing Basin 4 outfall. A pond would be anticipated near Panther Creek to treat this runoff as well as runoff from other basins. This will further be reviewed in subsequent design phases for feasibility. Based on the survey data, this would likely result

in conflict with existing bypass pipes, but a conflict box may be considered in this location. See subsequent section in this report for more details on the proposed conflict box.

Basins 5 – 11 result in a significant increase in impervious area due to the road widening and addition of sidewalks, also resulting in substantial increases in flow at each outfall. Since the Basin 5-8 outfalls are already located in areas of concern, the design team recommends piping this flow down near Panther Creek to reduce the flow going to the sensitive area described in existing conditions. A pond would be constructed near Panther Creek at the existing Basin 11 outfall to provide water quality treatment for these basins prior to discharge. Since the Panther Creek drainage area is greater than 5 sq. mile, it is anticipated that Channel Protection, Overbank Flood Protection, and Extreme Flood Protection would not be required since the increase in flow resulting from the project would be insignificant relative to the overall flow in the Creek and the timing of the peaks would likely result in no increase in the peak flow. GDOT has requested a detailed downstream analysis using hydrograph routing be provided to demonstrate that the project would not result in any adverse impacts downstream. If this cannot be demonstrated, then detention would be required to accommodate Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. The pond shown in the concept report is sized assuming detention is required to display the more conservative footprint.

Basin 12 results in a slight increase in impervious area due to the road widening. The road centerline shifts in this area, resulting in more of the proposed pavement going to Basin 13. A stormwater pond was sized for Basin 12. Similar to Basins 5-11, the pond will ideally only be to provide water quality since the basin discharges directly into a greater than 5 sq. mile drainage basin. As noted, a detailed downstream analysis using hydrograph routing be provided to demonstrate that the project would not result in any adverse impacts downstream. If this cannot be demonstrated, then detention would be required to accommodate Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. The footprint shown in the drainage maps included in this report would increase if detention was also required and due to the terrain in that area would likely become infeasible without impacting a stream buffer and requiring additional fill in the floodplain, triggering additional FEMA requirements.

Basin 13 results in a significant increase in impervious area due to the road widening and, therefore, an increase in flow. Stormwater ponds and enhanced swales were reviewed for Basin 13, but the area available to construct a pond is not large enough for the volumes required. The surrounding terrain is too steep to even construct water quality measures, and therefore, detention cannot be provided either. As the design progresses and cross sections are developed, bioslopes will also be reviewed for feasibility in this area. This basin will be included in the detailed downstream analysis and, only if warranted, the Basin 11 pond can be sized to offset any anticipated adverse impacts of not providing detention in this Basin, since the outfall of Basins 13 converges with the Basin 11 outfall just downstream along Panther Creek.

Basins 14 - 21 result in a significant increase in impervious area due to the road widening and addition of sidewalks, also resulting in substantial increases in flow at each outfall. To minimize the impacts of these increased flows to the adjacent properties (specifically since many are residential areas), the design team recommends piping this flow down to Panther Creek near the existing Basin 15 outfall to reduce the flow going to the sensitive area described in existing conditions. A pond would be constructed near Panther Creek to provide water quality treatment for these basins prior to discharge. Since the Panther Creek

drainage area is greater than 5 sq. miles, it is anticipated that Channel Protection, Overbank Flood Protection, and Extreme Flood Protection would not be required since the increase in flow resulting from the project would be insignificant relative to the overall flow in the Creek and the timing of the peaks would likely result in no increase in the peak flow. GDOT has requested a detailed downstream analysis using hydrograph routing be provided to demonstrate that the project would not result in any adverse impacts downstream. If this cannot be demonstrated, then detention would be required to accommodate Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. The pond shown in the concept report is sized assuming detention is required to display the more conservative footprint.

Basin 22 results in a significant increase in impervious area and, therefore, a substantial increase in flow at the outfall point to this basin. A stormwater pond was sized to provide Water Quality, Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. Due to the lack of available right of way, this pond would result in the take of entire parcel between the road and an existing business. In addition, a detailed downstream analysis would be required since the flow from this outfall enters an existing residential area, some of which appears to have limited freeboard to the residential parcels and nearby structuress. Additional survey data is also needed in this area as there are concerns about the impact of this pond to a stream and to the utilities, which may result in the location being infeasible. If the pond is not feasible, the design team recommends piping this additional flow to the pond at Panther Creek near outfall 15. This would increase the pipe sizes to convey the flow to that point and would increase the pond size at Panther Creek, but appears to be an option that could be considered if needed. This would also require a detailed downstream analysis as mentioned above.

Basins 23 and 24 are combined in the proposed condition and routed to the Basin 24 outfall. Only a minimal amount of impervious area is added to these basins, most of which is sidewalk and a small amount of road widening. A stormwater pond was sized for this basin to provide Water Quality, Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. Feasibility of this pond will be reviewed during a subsequent design phase.

Basin 25 results in a minimal amount of impervious area added to the basin, most of which is sidewalk and an area for turn around. A stormwater pond was sized for this basin to provide Water Quality, Channel Protection, Overbank Flood Protection, and Extreme Flood Protection. Feasibility of this pond will be reviewed during a subsequent design phase. At the current time, this pond will likely be infeasible due to cost given the size relative to the associated improvements in the basin. A smaller pond was sized farther upstream in this basin, but this pond would eliminate access to the parcel so it would also be infeasible.

Modeling Approach

To prepare a concept level stormwater model of the project, the design team used Hydraflow Hydrographs and the NRCS Curve Number Method (previously referred to as SCS Method). In this program, existing and proposed hydrographs were created based on drainage areas, curve numbers, and time of concentrations for each basin. Ponds or other BMPs were also modeled in their applicable basin. These hydrographs were compared at each outfall point to determine the extent of BMPs required to not only provide water quality treatment and channel protection, where required, but to also make sure the post-project flow at each point was reduced or resulted in no significant adverse impacts. Included as an

attachment to this report are a summary of the results. These results include estimated flow values pre-project and post-project along with information on anticipated BMPs and other applicable notes. During subsequent design phases more data will be provided on the modeling and detailed results.

Conflict Boxes

Due to the concerns of increasing discharge at some of the existing outfall, many of the basins are being piped down to Panther Creek to minimize impacts to adjacent businesses and residential areas. The goal would be to allow the off-site bypass to continue under the road in culverts as it does today, while the most of the road drainage will be captured and piped downstream. One issue that was discovered during the site visit and subsequent review of the survey is that there is limited cover to allow the bypass pipes to continue under or over the proposed road pipes. The design team wants to investigate the option of using a conflict box in these areas to allow the new road drainage pipes to be piped through areas of conflicts using concrete boxes and ductile iron pipe. This idea was presented to GDOT during an MS4 preliminary concept review meeting. GDOT was receptive to this idea, provided modeling be done to show that ductile iron pipes won't restrict the flow through the boxes and that surcharge won't create issues such as pressure on the ductile iron pipe. This modeling will be reviewed as part of the detailed downstream analysis needed for the project. A preliminary detail will be developed in subsequent design phases.

Future Downstream Analysis

This project takes a somewhat unique approach to the stormwater management. In lieu of providing ponds or other BMPs at each outfall, multiple drainage basins are combined and piped to downstream outfalls. While the initial post-project compared to pre-project numbers demonstrate that flows at the outfall points are generally reduced or that no adverse impacts are anticipated, there is still an issue of the timing of the peak flows farther downstream that will need to be addressed in subsequent design phases. This detailed downstream analysis will need to show that the peak flow from Panther Creek does not coincide with any peak flows from the project construction, resulting in an overall increase in flow and possible flooding. Due to the quantity of storm drain pipe, ponds, and the FEMA regulated stream at the outfall, the design team would recommend that the downstream analysis be performed in a program such as XP-SWMM or other similar software to provide dynamic modeling that can account for the storage along the system and show areas of flooding concern. This program results in hydrographs that can be compared to demonstrate no adverse impacts. This detailed downstream analysis can also be calibrated with the bridge hydraulic study for the project. If the detailed study results in increases in adverse impacts downstream, then additional detention may be required within the project limits.

Next Steps

During subsequent design phases, the stormwater design will be updated as the roadway design progresses. The detailed downstream analysis will be performed to determine if the conflict boxes will work and/or if additional detention will be required on the project. The pond locations and sizes will be reviewed in more detail and refined for right-of-way acquisition. A more detailed stormwater management report will be prepared and will include the required reporting for infeasibility and outfall level exclusions.

As part of the next phase of design, additional survey and geotechnical investigation will also be required. Since some of the MS4 facilities and outfalls are not located adjacent to the road, at this time there is limited survey data in these areas. This additional survey will be required to prepare detailed grading and confirm feasibility. Also, some geotechnical investigation is required in the proposed pond locations, specifically in the ponds located in or adjacent to the Panther Creek floodplain, to determine the existing ground water elevations and soil properties for the pond design.

Attachments to Report

- Overall Summary of Results Table
- Stormwater and Drainage Concept Design Maps – STORM-001 – STORM-006

SR 42 CONCEPT DESIGN - MS4 BASIN BY BASIN ANALYSIS

PROJECT DRAINAGE AREA ID	PRE-PROJECT TOTAL DRAINAGE AREA (AC)	PRE-PROJECT ON-SITE IMPERVIOUS AREA (AC)	POST-PROJECT TOTAL DRAINAGE AREA (AC)	POST-PROJECT ON-SITE IMPERVIOUS AREA (AC)	NET NEW IMPERVIOUS AREA (AC)
1	6.32	1.50	6.32	1.59	***0.09***
2	0.67	0.56	0.65	0.59	***0.03***
3	8.52	2.14	8.52	2.25	***0.11***
4	17.30	2.32	17.30	3.40	***1.08***
5	0.86	0.35	0.86	0.46	***0.11***
6	13.88	0.59	13.88	2.10	***1.51***
7	9.74	0.62	9.74	1.61	***0.99***
8	8.36	0.38	8.36	1.17	***0.79***
9	16.42	0.92	16.42	2.72	***1.80***
10	3.28	0.38	3.28	0.68	***0.30***
11	4.70	0.24	4.70	0.83	***0.59***
12	3.15	0.40	3.62	0.96	***0.56***
13	2.30	0.30	1.84	0.90	***0.60***
14	1.06	0.37	1.06	0.45	***0.08***
15	4.90	0.13	5.52	1.21	***1.08***
16	2.00	0.27	2.00	1.06	***0.79***
17	11.43	0.52	11.43	1.40	***0.88***
18	0.63	0.09	0.63	0.40	***0.31***
19	4.52	0.63	4.52	1.38	***0.75***
20	0.77	0.41	0.77	0.55	***0.14***
21	0.54	0.50	0.54	0.50	***0.00***
22	33.62	3.93	33.59	6.33	***2.40***
23	0.17	0.01	0.10	0.06	***0.05***
24	1.31	0.51	1.54	0.74	***0.23***
25	1.96	0.19	1.96	0.37	***0.18***

TOTAL NET NEW IMPERVIOUS	**15.45**

SR 42 CONCEPT DESIGN - MS4 BASIN BY BASIN ANALYSIS

PROJECT DRAINAGE AREA ID	PRE-PROJECT CN	POST-PROJECT CN	PRE-PROJECT 25-YEAR FLOW (CFS)	POST-PROJECT 25-YEAR FLOW - UNDETAINED (CFS)	POST-PROJECT 25-YEAR FLOW - ROUTED (CFS)	WQ	CPv	OFP	EFP
1	89.7	90.2	39.86	39.97	N/A				
2	92.0	94.9	5.65	5.84	N/A				
3	87.1	87.5	50.51	52.86	49.86	X	X	X	X
4	73.2	75.6	63.92	N/A	52.19	X	X	X	X
5	77.2	81.3	4.00	1.11	N/A	X	X	X	X
6	70.4	74.8	37.45	36.15	N/A	X	X	X	X
7	70.6	74.4	33.97	31.46	30.86	X	X	X	X
8	57.8	61.5	12.87	11.86	N/A	X	X	X	X
9	64.3	68.4	24.84	23.67	N/A	X	?	?	?
10	61.4	64.5	7.59	6.74	N/A	X	?	?	?
11	69.6	74.8	15.91	85.69	10.84	X	?	?	?
12	61.8	67.7	8.81	N/A	15.74	X			
13	64.8	72.6	7.01	11.79					
14	73.9	77.5	3.86	2.07	N/A	X	?	?	?
15	61.4	70.2	42.11	71.11	41.49	X	?	?	?
16	67.6	84.2	6.72	3.36	N/A	X	?	?	?
17	62.5	65.3	31.88	26.22	N/A	X	?	?	?
18	64.1	83.1	2.65	0.80	N/A	X	?	?	?
19	69.6	75.8	17.87	13.47	N/A	X	?	?	?
20	82.4	89.3	Combined in 19 - Will update for Final Concept			X	?	?	?
21	95.0	95.0	4.02	4.02	N/A				
22	70.3	73.1	96.64	N/A	88.55	X	X	X	X
23	63.1	61.0	0.72	0.44	N/A	X	X	X	X
24	74.3	78.6	5.93	N/A	3.35	X	X	X	X
25	65.6	69.1	7.90	N/A	7.42	X	X	X	X

SR 42 CONCEPT DESIGN - MS4 BASIN BY BASIN ANALYSIS

PROJECT DRAINAGE AREA ID	BMP(S) ANTICIPATED	APPLICABLE OUTFALL LEVEL EXCLUSIONS OR INFEASIBILITY CRITERIA	GENERAL NOTES
1	NONE	Outfall Level #6 - Change in Impervious is minimal (although not zero); Infeasibility #5 - Would require displacement of business; Infeasibility #9 - Site too small.	Change in flow less than 1 cfs. Flow is assumed to go to pond downstream of Walmart Pond. Need survey confirmation.
2	NONE	Outfall Level #6 - Change in Impervious is minimal (although not zero); Infeasibility #5 - Would require displacement of business; Infeasibility #9 - Site too small. Option would require additional ROW with demolition of existing parking.	Consider removing 1950 SF of pavement in walmart far parking lot to account for the 1950 SF of new impervious in Basin 2.
3	BIORETENTION AREA	Possible Outfall Level #6 - Change in Impervious is minimal (although not zero)	Adding 0.1 acres of new impervious to 8.5 acres drainage basin. Potentially treat in small bioretention area but will require additional right of way, additional curbing or small wall in parking area. May be cost infeasible.
4	EXCAVATED STORMWATER WET POND	NONE	Pond treats existing pavement while letting some proposed pavement bypass due to elevation issues with pipes. Alternate: if routed to Pond 11 (Church Pond), there will be a conflict with the existing crossdrain at STA 218+50.
5	NONE	NONE	Flow routed to Pond 7 or Pond 11 (Church Pond)
6	NONE	NONE	Flow routed to Pond 7 or Pond 11 (Church Pond)
7	OPTIONAL EXCAVATED STORMWTER WET POND	NONE	This pond is optional and would drastically reduce the size of Pond 11.
8	NONE	NONE	Flow routed to Pond 7 or Pond 11 (Church Pond). Cross drains in this basin and the basin 9 will not remain, all bypass water captured in the longitudinal system.
9	NONE	NONE	Flow routed to Pond 11 (Church Pond). Cross drains in this basin and the basin 8 will not remain, all bypass water captured in the longitudinal system.
10	NONE	NONE	Flow routed to Pond 11 (Church Pond)
11	WATER QUALITY ONLY POND OR WET POND	CPv, OFB, EFP waived due to discharging in >5 sq. mi. basin	Pond sizing provided for WQ only or total in case environmental issues require overall treatment.
12	EXCAVATED STORMWATER WET POND	NONE	Only need to treat the water quality volume since we are discharging into a basin of greater than 5 square miles
13	?	Infeasibility #9 - Site too small.	Can't fit pond. Consider overcompensating in Basin 11 (Pond)
14	NONE	NONE	Roadway routed to Pond 15.
15	EXCAVATED STORMWATER WET POND STA 271+00 RT	CPv, OFB, EFP waived due to discharging in >5 sq. mi. basin	Pond located in flood plain. Need geotech for water table. Difficult to get bottom of pond above river normal pool. Ok for a wet pond?
16	NONE	NONE	Roadway routed to Pond 15.
17	NONE	NONE	Roadway routed to Pond 15.
18	NONE	NONE	Roadway routed to Pond 15.
19	NONE	NONE	Roadway routed to Pond 15.
20	NONE	NONE	Roadway routed to Pond 15.
21	NONE	Outfall Level #6 - No increase in impervious area.	No new impervious area
22	EXCAVATED STORMWATER WET POND STA 301+00 LT	NONE	Possible stream impacts. Need more survey for confirmed drainage patterns. Alternative: This Basin can be routed to Pond 15, but the bottom of the pond would likely be at or below normal pool for the river. Ok for a wet pond?
23	NONE	NONE	Existing and new impervious area routed to Pond in basin 24 in post-project conditions
24	EXCAVATED AND DAMMED STORMWATER WET POND STA 328+00 RT	NONE	Slope sidewalk from 325+50 to 329+00 away from road into pond on north side.
25	EXCAVATED STORMWATER WET POND STA 326+50 LT	NONE	Slope sidewalk from 325+50 to 327+50 away from road into pond on south side.

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PROJECT DRAINAGE AREA ID	PRE-PROJECT TOTAL DRAINAGE AREA (AC)	PRE-PROJECT ON-SITE IMPERVIOUS AREA (AC)	POST-PROJECT TOTAL DRAINAGE AREA (AC)	POST-PROJECT ON-SITE IMPERVIOUS AREA (AC)	NET NEW IMPERVIOUS AREA
1	6.32	1.50	6.32	1.59	***0.09***
2	0.67	0.56	0.65	0.59	***0.03***
3	8.52	2.14	8.52	2.25	***0.11***

EXISTING ON-SITE IMPERVIOUS
NEW ON-SITE IMPERVIOUS
DRAINAGE BASIN LINE
ENVIRONMENTALLY SENSITIVE AREA
PROPOSED STORM DRAIN PIPE

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SCALE IN FEET
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REVISION DATES

STORMWATER AND DRAINAGE CONCEPT DESIGN

SR 42 (ALT B3)
FROM SR138/HENRY TO I-675/CLAYTON

DRAWING No. STORM-001

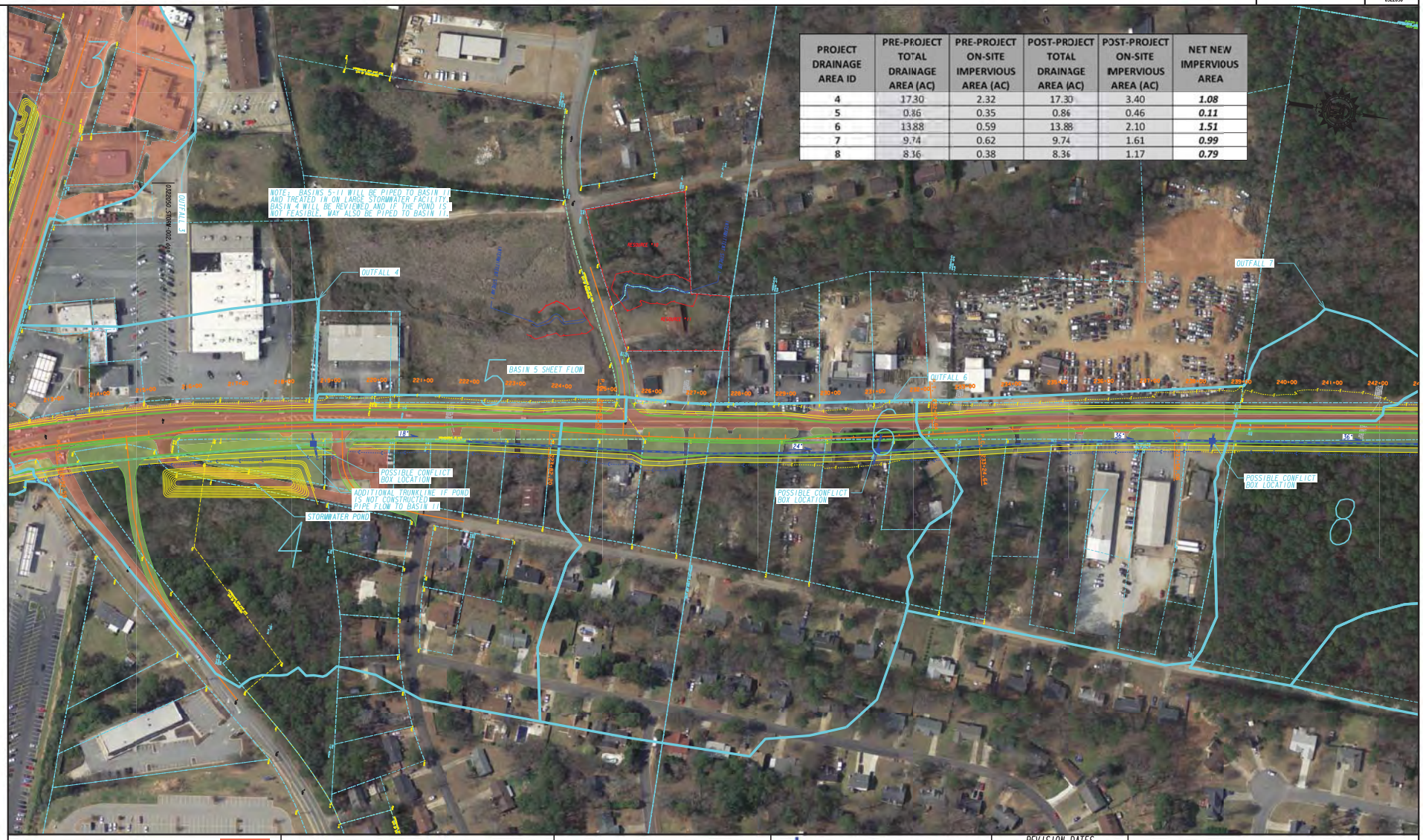
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P. I. No.
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PROJECT DRAINAGE AREA ID	PRE-PROJECT TOTAL DRAINAGE AREA (AC)	PRE-PROJECT ON-SITE IMPERVIOUS AREA (AC)	POST-PROJECT TOTAL DRAINAGE AREA (AC)	POST-PROJECT ON-SITE IMPERVIOUS AREA (AC)	NET NEW IMPERVIOUS AREA
4	17.30	2.32	17.30	3.40	***1.08***
5	0.86	0.35	0.86	0.46	***0.11***
6	13.88	0.59	13.88	2.10	***1.51***
7	9.74	0.62	9.74	1.61	***0.99***
8	8.36	0.38	8.36	1.17	***0.79***



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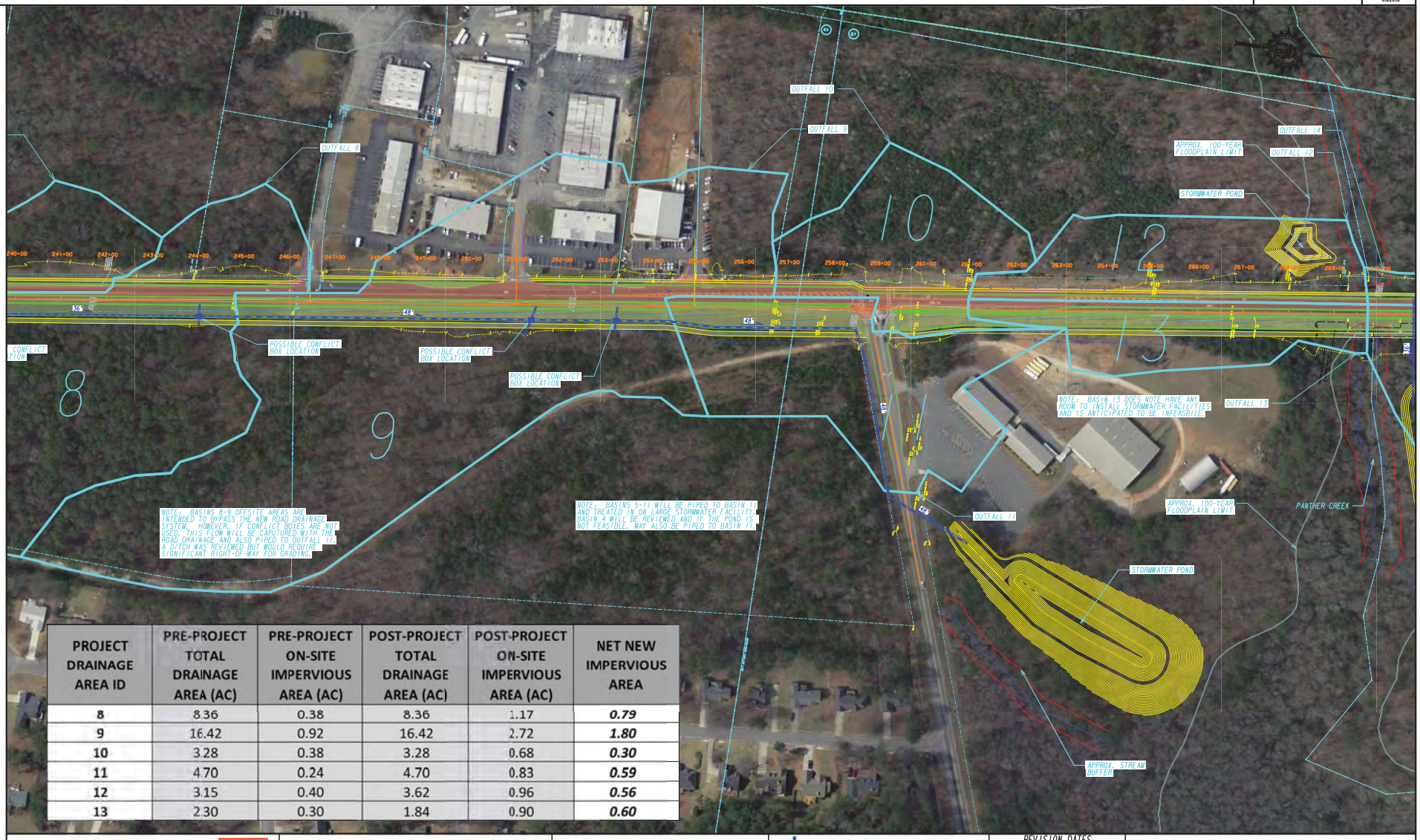
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0322050



PROJECT DRAINAGE AREA ID	PRE-PROJECT TOTAL DRAINAGE AREA (AC)	PRE-PROJECT ON-SITE IMPERVIOUS AREA (AC)	POST-PROJECT TOTAL DRAINAGE AREA (AC)	POST-PROJECT ON-SITE IMPERVIOUS AREA (AC)	NET NEW IMPERVIOUS AREA
8	8.36	0.38	8.36	1.17	***0.79***
9	16.42	0.92	16.42	2.72	***1.80***
10	3.28	0.38	3.28	0.68	***0.30***
11	4.70	0.24	4.70	0.83	***0.59***
12	3.15	0.40	3.62	0.96	***0.56***
13	2.30	0.30	1.84	0.90	***0.60***

EXISTING ON-SITE IMPERVIOUS
NEW ON-SITE IMPERVIOUS
DRAINAGE BASIN LINE
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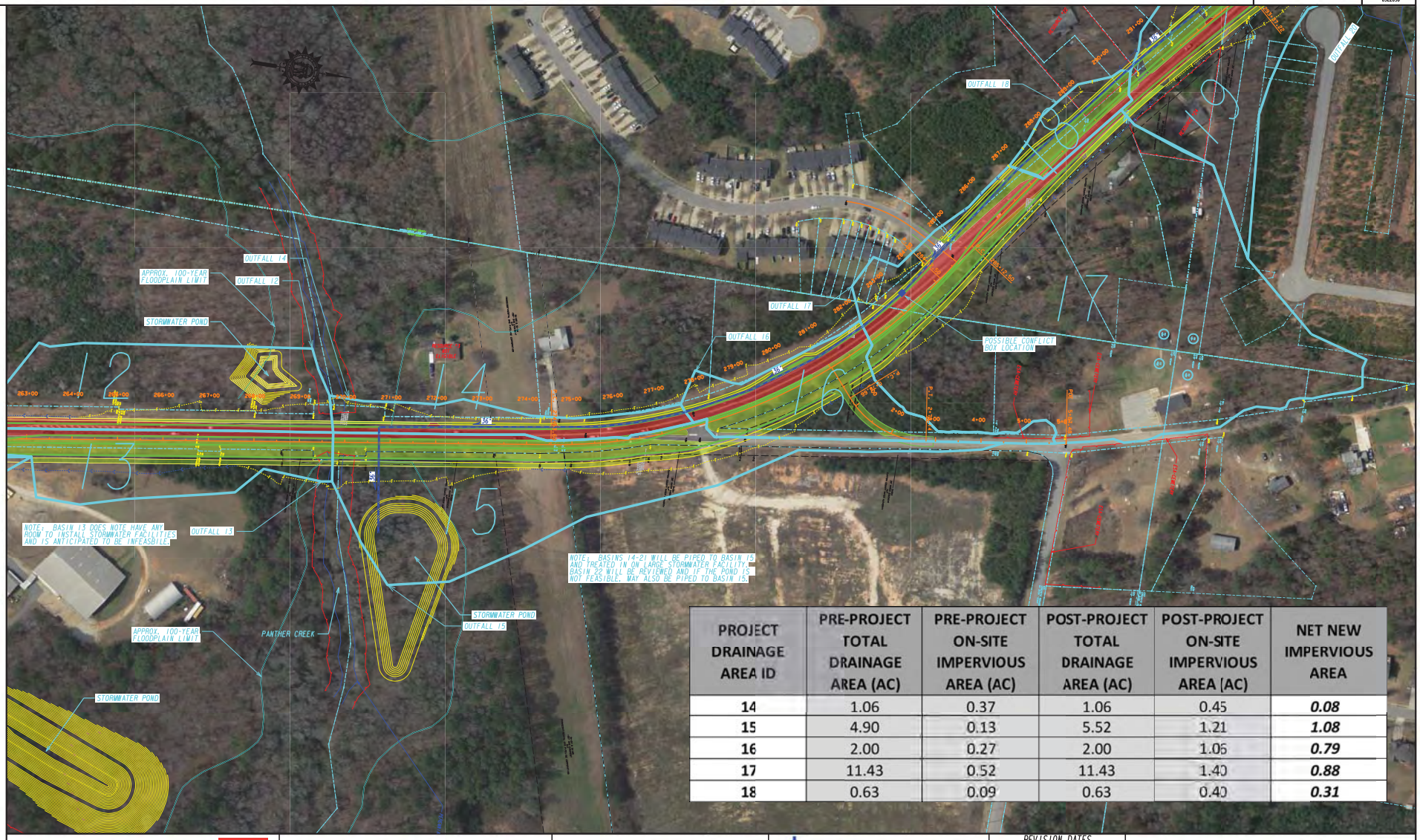
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PROJECT DRAINAGE AREA ID	PRE-PROJECT TOTAL DRAINAGE AREA (AC)	PRE-PROJECT ON-SITE IMPERVIOUS AREA (AC)	POST-PROJECT TOTAL DRAINAGE AREA (AC)	POST-PROJECT ON-SITE IMPERVIOUS AREA (AC)	NET NEW IMPERVIOUS AREA
14	1.06	0.37	1.06	0.45	***0.08***
15	4.90	0.13	5.52	1.21	***1.08***
16	2.00	0.27	2.00	1.06	***0.79***
17	11.43	0.52	11.43	1.40	***0.88***
18	0.63	0.09	0.63	0.40	***0.31***

EXISTING ON-SITE IMPERVIOUS
NEW ON-SITE IMPERVIOUS
DRAINAGE BASIN LINE
ENVIRONMENTALLY SENSITIVE AREA
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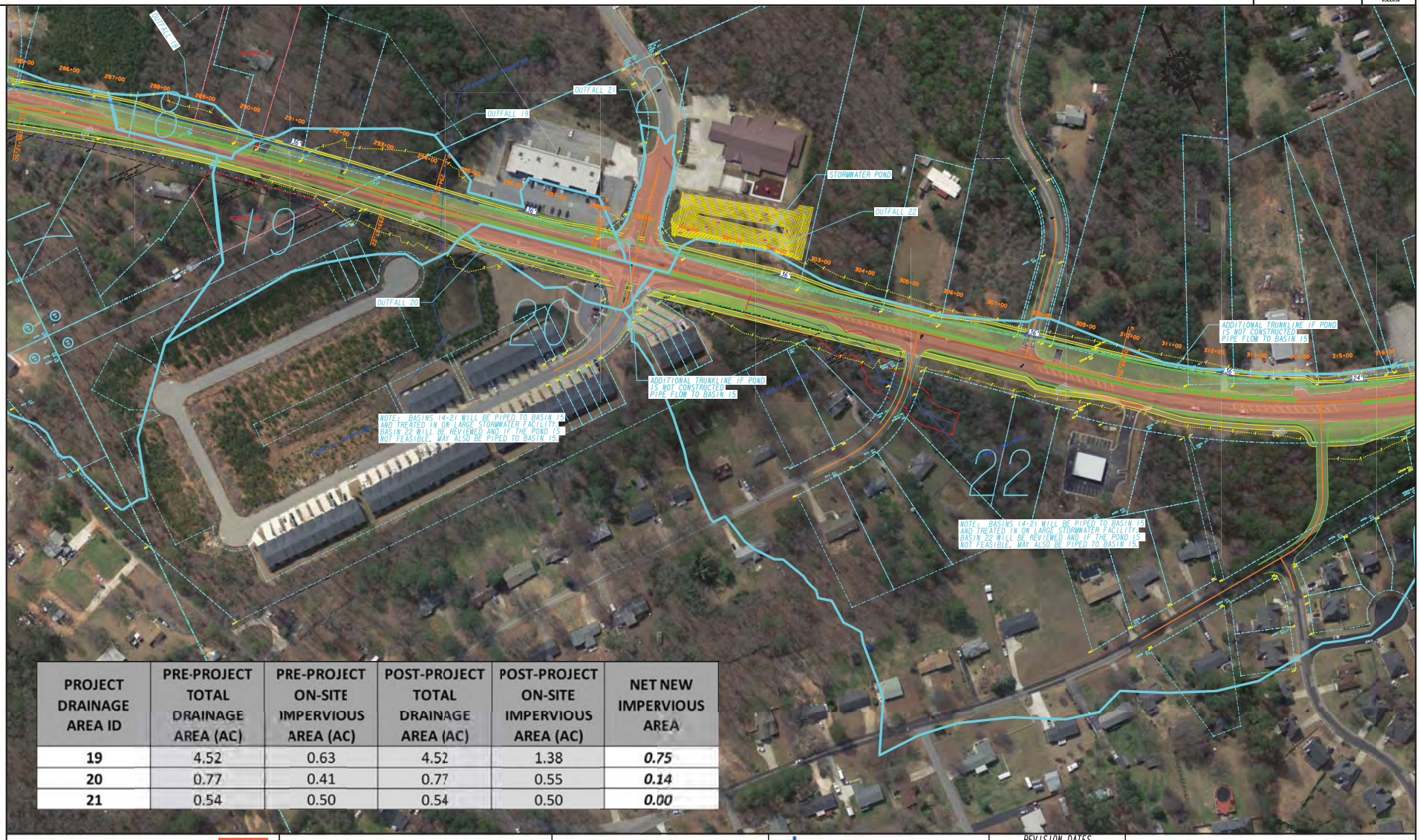
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PROJECT DRAINAGE AREA ID	PRE-PROJECT TOTAL DRAINAGE AREA (AC)	PRE-PROJECT ON-SITE IMPERVIOUS AREA (AC)	POST-PROJECT TOTAL DRAINAGE AREA (AC)	POST-PROJECT ON-SITE IMPERVIOUS AREA (AC)	NET NEW IMPERVIOUS AREA
19	4.52	0.63	4.52	1.38	***0.75***
20	0.77	0.41	0.77	0.55	***0.14***
21	0.54	0.50	0.54	0.50	***0.00***

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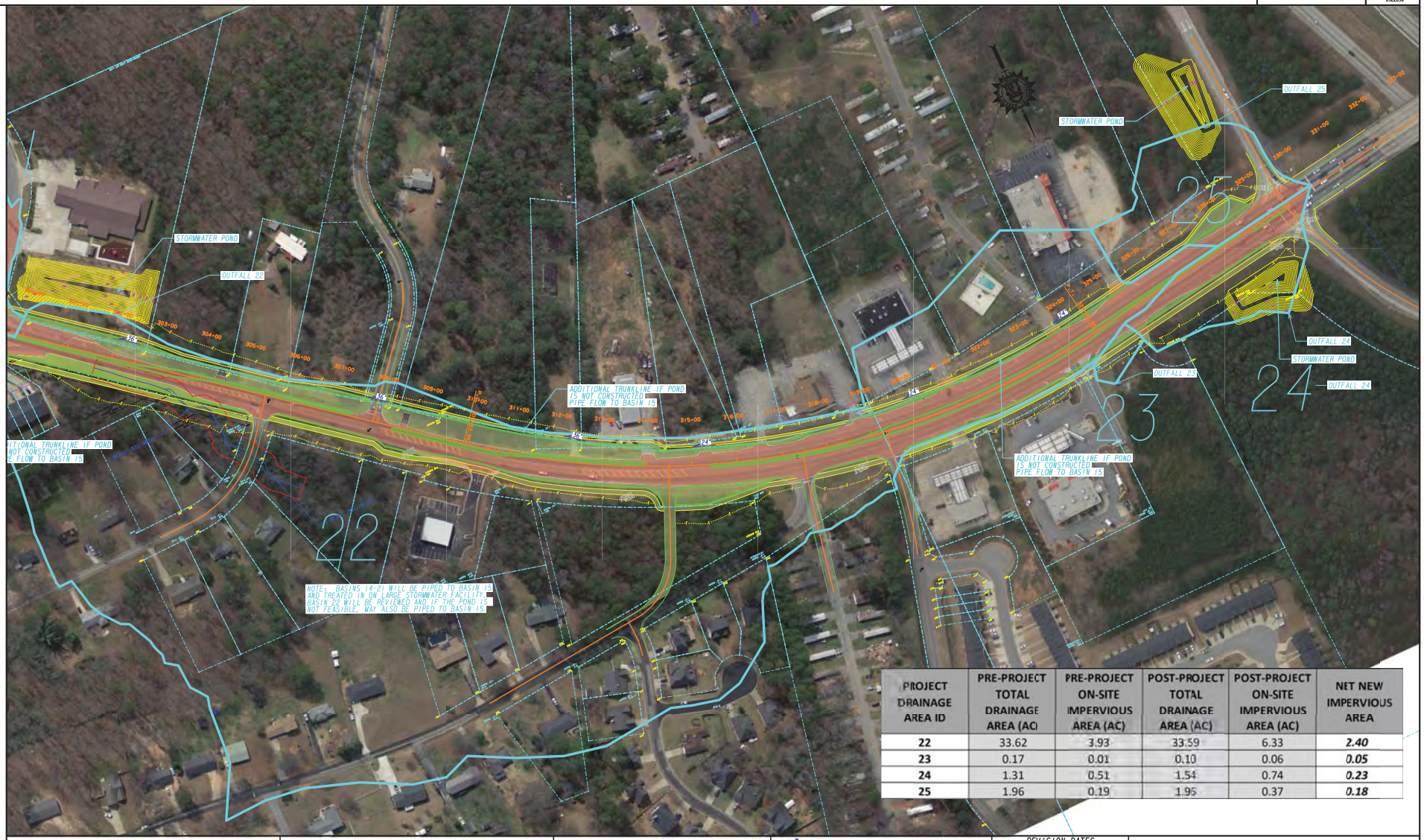
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22	33.62	3.93	33.59	6.33	***2.40***
23	0.17	0.01	0.10	0.06	***0.05***
24	1.31	0.51	1.54	0.74	***0.23***
25	1.96	0.19	1.95	0.37	***0.18***

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AS-BUILD DESIGN | CONSTRUCTION MANAGEMENT & INSPECTION

SCALE IN FEET
0 100 200 400

REVISION DATES

STORMWATER AND DRAINAGE CONCEPT DESIGN

SR 42 (ALT B3)
FROM SR138/HENRY TO I-675/CLAYTON

DRAWING No.
STORM-006

10/23/2015 GPLN

McGee Partners, Inc.
13 Corporate Boulevard NE
Suite 200
Atlanta, Georgia 30329
T 770.938.6400

Meeting Notes

Date: June 8, 2016 Time: 1:00 pm

Location: Stockbridge City Hall

Subject: SR 42 Concept Team Meeting

Project No: PI 0322050 MPI: 2001034

Recorded By: Josh Sofsky

Attendees:

Name	Organization	Phone	Email
Aaron Burgess	GDOT Office of Environmental Services	404-631-1159	aburgess@dot.ga.gov
Josh Earhart	EPEI	770-333-9484	jearhart@edwards-pitman.com
Anthony S. Ford	City of Stockbridge	678-215-6142	asford@cityofstockbridge-ga.gov
Keenar Ford	GDOT District 3 Construction	706-646-7508	kford@dot.ga.gov
Michael Harris	City of Stockbridge	770-389-7904	mharris@cityofstockbridge-ga.gov
Aminul Islam	GDOT District 7	404-326-5575	aislam@dot.ga.gov
Bruce Mercer	Clayton County	770-477-3674	bruce.mercer@claytoncountyga.gov
Tyler Peek	GDOT District 3 Traffic Operations	706-646-7591	tpeek@dot.ga.gov
Roque Romero	Henry County SPLOST	770-288-7319	rromero@co.henry.ga.us
Matt Sanders	GDOT Engineering Services	404-631-1752	msanders@dot.ga.gov
David Simmons	Henry County DOT	770-288-7641	dsimmons@co.henry.ga.us
Harland Smith	GDOT Utilities	706-646-7606	hasmith@dot.ga.gov
Quinton L. Spann	GDOT Planning	404-631-1646	qspann@dot.ga.gov
Kevin VanHouten	GDOT Office of Program Delivery	706-741-3469	kvanhouten@dot.ga.gov
Leah Vaughan	Sycamore	404-377-9147	leahvaughan@sycamoreconsulting.net
Megan Weiss	GDOT Planning	404-631-1779	mweiss@dot.ga.gov
Jim Woodson	EPEI	770-333-9484	jwoodson@edwards-pitman.com
Tommy Crochet	McGee Partners	770-938-6400	tcrochet@mcgeepartners.com
Ashley Ryckeley	McGee Partners	770-938-6400	aryckeley@mcgeepartners.com

Meeting Notes

Stockbridge City Hall
June 8, 2016
P.I. No. 322050 – SR 42 from SR 138 to I-675

Josh Sofsky McGee Partners 770-938-6400 jsofsky@mcgeepartners.com

The purpose of the concept team meeting was to present the proposed SR 42 concept and revised concept report as well as allowing discussion by the attendees.

GDOT Project Manager Kevin VanHouten welcomed attendees, gave a brief project description and made introductions. He noted that the project is scheduled for Right-of-Way in 2017 and Construction in 2019. He said that Right-of-Way Authorization should change to 2018 and Construction to 2020.

Project Overview
Tommy Crochet of McGee Partners provided an overview of the project. The justification is to improve the level of service along the corridor due to increasing volumes and to reduce crash frequency and severity. The termini are both four-lane roads at the north and south ends.

Public Involvement
The Public Information Open House (PIOH) is scheduled for July 28th from 5 to 7 pm at the Ted Strickland Community Center located at 137 North Berry Street, Stockbridge, Georgia 30281. Flyers for the event are available, and a dry run should occur a couple weeks prior. Public input may help influence the location of RCUT intersections and the shared use path.

Concept Layout
The proposed improvements include providing four basic lanes from SR 138 to I-675. The vertical alignment mostly follows existing grade in order to use existing pavement and simplify staging. The grade will be raised at Panther Creek to replace the existing four-barrel culvert with a bridge. The existing "rollercoaster" profile is smoothed between Sunset Hills Boulevard and Biscayne Boulevard by filling in the sags and cutting one of the crests.

Displacements should be limited to properties where SR 42 is widened to the east, near Old Atlanta Highway. Two historical resources are located across the street from each other north of Sunset Hills Boulevard. The typical section is tightened through this area to minimize impacts. Impacts are minor on the east side, but large trees are impacted on the west.

The project must comply with GDOT's MS4 Permit. The south end of the project is urbanized and does not have many options for treatment, but minimal impervious surface should be added here. Offsite drainage should continue to flow through cross drains, but pavement drainage should be piped downhill to ponds adjacent to Panther Creek. These ponds are more feasible than options upland in developable parcels. Increased flows at some of the existing cross-drain outfalls should be avoided due to risk of adverse impact to downstream properties.

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The concept layout depicts proposed right-of-way and easements. Standard right-of-way is typically fifteen feet behind the back of sidewalk. The roadway slopes should be contained within permanent easements, if not right-of-way. McGee Partners will send Kevin VanHouten the conceptual layouts with parcel numbers, right-of-way and easement areas in order to request a conceptual right-of-way cost estimate.

The City of Stockbridge asked about the property left over at the corner of Davis Road and SR 42 when Davis Road is shifted. It is surplus property and is not conducive to a pond. Right-of-way negotiations have not commenced.

Construction staging should be straightforward, because one side can be built while traffic travels on the existing pavement. Traffic can then be staged on one side of the road while the other side is being constructed.

Revised Concept Report
The original concept in 1991 called for widening and a raised median. The current traffic projections warrant the same. Bicycle accommodations appear to be warranted and are proposed to be met with a ten-foot multiuse path along the east side of the road. The construction may begin further south of SR 138 in order to add a second northbound thru lane at the intersection. The inside travel lane may be reduced to eleven feet wide based on recommendations in the value engineering study.

An existing pavement analysis was conducted by Ranger Consulting, which showed that much of the roadway is conducive to overlay. Concrete pavement will not be used on this project.

Kevin VanHouten asked when Underground Storage Tanks (USTs) would be investigated. Tommy said that this should occur towards the end of preliminary plans before right-of-way.

Quinton Spann with GDOT Planning requested additional information. He asked for a description of land uses along the corridor and general statement about the location of crashes added to the Project Justification Statement.

Project cost estimates should be completed before the Public Information Open House.

Traffic Operations
Widening the roadway to four lanes should provide the necessary capacity. Some degradation of the level of service at the SR 138 intersection is likely in 2042, but still acceptable.

Restricted Crossing U-Turns (RCUTs) are proposed on this project after a meeting with GDOT Traffic Operations. These alternative intersections are known to reduce overall crashes as well as crash severity. Truck loons capable of handling a WB-67 U-turn are shown at some locations.

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Since this is not a commonly used intersection in Georgia, public education will be necessary. GDOT's VERG is producing an RCUT simulation for this project. The FHWA has produced a video and brochures about RCUTs as well. All of these resources should be available at the PIOH. Tyler Peek of GDOT District 3 Traffic Operations explained that the time increase of making a right turn and a U-turn due to an RCUT is similar to the delay from a traffic signal. He also noted that an RCUT location in Henry County has improved crash results over the previous condition. Tommy asked Tyler to produce a case study for the intersection.

Michael Harris of the City of Stockbridge inquired why the traffic signal at Valley Hill Road is shown as removed. Tyler Peek explained that southbound left turns only meet the 70% warrant, so a signal is not required. The RCUT intersection eliminates the westbound left turn onto SR 42 southbound. The layout should reflect "Potential Signals to be Evaluated" at Daniel Drive, Valley Hill Road and south of Homestead Road.

David Simmons of the Henry County DOT drew attention to the potential development across from the Valley Hill Road intersection, and noted their driveway could line up with the RCUT. Tommy suggested the driveway should be located just north before the next median U-turn. David also explained that the empty lot at Old Macon Highway is sometimes used to store trailers. This intersection would no longer have full access, but truck U-turn loons are provided just south and half a mile north of the intersection. Tyler explained that an RCUT at the Old Macon Highway intersection was discussed, but the spacing was too close to Sunset Hills Boulevard.

Matt Sanders with GDOT Engineering Services questioned the proposed U-turn just south of the I-675 northbound ramps. He was concerned how vehicles would turn against the fast-moving off ramp traffic. Tommy noted that this U-turn needs more investigation. Its proximity to the northbound off ramp could facilitate a wrong way driver, but it is needed for access for properties near the ramps. Matt noted that its back to back turn lanes reduce storage for southbound left turns into the gas station.

Aminul Islam with GDOT District 7 Traffic Operations asked if U-turning drivers would improperly use the signal at the ramp intersection. Tommy explained this could be mitigated through signs or channelization. Aminul was also concerned about the change in Waffle House's access. Tommy indicated a Waffle House representative had inquired about the project and property access prior to constructing the new restaurant, and they were told a median would be installed across their access. Tommy explained that change in access is not compensable. Aminul noticed many driveways on the plan. McGee Partners will send the concept drawings to the GDOT District Traffic Offices, so they can determine which driveways, if any, can be eliminated.

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Bruce Mercer with Clayton County asked if larger trucks can make a U-turn at the Brookwood intersection. Standard U-turn pavement is available at the intersection, but larger trucks must use one of the loons up or downstream from the intersection.

Fiber optic cable should not need to be run between traffic signals. Tyler specified that cellular communication should be specified for all traffic signals on the state network.

Environmental
GDOT has decided to pay for the project with state funds instead of federal. This allows state environmental oversight, which is much more streamlined than the NEPA process. Ecology permits are still required, as well as archaeology studies. Historical impacts must be coordinated with SHPO and possibly mitigated. Josh Earhart of Edwards Pitman is leading the Assessment of Effects. It should include a memorandum of agreement for the historic resources across the street from each other. Plant species and fish species in Panther Creek should be surveyed. The project's effect on air quality should also be measured.

Utilities
The major utility conflicts along the project corridor were discussed. A sanitary sewer line along Panther Creek should be undisturbed by the proposed bridge. Clayton County's 24-inch water main has its own 20-foot wide easement. The project will impact the water line most of its length, so both the water line and the easement will need to be relocated. The Williams-Transco Pipeline with four gas lines will need to have their casings extended. Georgia Power distribution lines will also be impacted.

Harland Smith of GDOT Utilities explained that a 15-foot clear corridor should be required for relocated aerial lines. Tommy mentioned that sewer manholes would end up in the travel lanes near Panther Creek, and questioned whether this would cause access issues.

The Project Framework Agreement will detail who will pay for utility relocations. Kevin explained that the local governments can contribute funding to accelerate utility relocations. He believes rescission letters were sent to Clayton County, Henry County and the City of Stockbridge, relieving them of any financial obligation for the project. Kevin will research and send copies of the letters to the respective jurisdictions.

Meeting Notes

Stockbridge City Hall
June 8, 2016
P.I. No. 322050 – SR 42 from SR 138 to I-675

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13 Corporate Boulevard NE
Suite 200
Atlanta, Georgia 30329
T 770.938.6400

Project PI No. 322050, SR 42 from SR 138 in Henry County to I-675 in Clayton County

Meeting Topic Concept Team Meeting

Location Stockbridge City Hall

Date/Time Wednesday, June 8, 2016, 1:00 p.m.

NAME	AGENCY/DIVISION	PHONE	E-MAIL
Tommy Crochet	McGee Partners	770-938-6400	tcrochet@mcgeepartners.com
Kevin Van Houten	GDOT/OPD	706-[24]-3469	kvanhouten@dot.ga.gov
Harland Smith	" - Utilities	706.646.7606	hasmith@dot.ga.gov
Matt Sanders	GDOT/Engineering Services	404)631-1752	msanders@dot.ga.gov
Josh Earhart	EPD/T	770 333-9484	jearhart@edwardsportman.com
Jim Woodson	EPD/T	770 333-9484	jwoodson@edwardsportman.com
Josh Sofsky	McGee Partners	770-938-6400	jsofsky@mcgeepartners.com
Ashley Ryckeley	McGee Partners	770-634-9647	ayo1688@yahoo.com
Rogue Romero	HC Specst	770-288-7319	rromero@henry.ga.us
AMINUL ISLAM	GDOT-D7	404-326-5575	aislam@dot.ga.gov

Meeting Notes

Stockbridge City Hall
June 8, 2016
P.I. No. 322050 – SR 42 from SR 138 to I-675

McGee Partners, Inc.
13 Corporate Boulevard NE
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Project PI No. 322050, SR 42 from SR 138 in Henry County to I-675 in Clayton County

Meeting Topic Concept Team Meeting

Location Stockbridge City Hall

Date/Time Wednesday, June 8, 2016, 1:00 p.m.

NAME	AGENCY/DIVISION	PHONE	E-MAIL
Aaron Burgess	GDOT/OFS	404-631-1159	aburgess@dot.ga.gov
TYLER PEEK	GPOT/D3 T.O.	706-692-7591	tpeek@dot.ga.gov
LEAH VAUGHAN	SYCAMORE	404 377 9147	leahvaughan@sycamore consulting.net
BRUCE MERCER	CLAYTON COUNTY	770-477-3674	BRUCE.MERCER@CLAYTONCOUNTYGA.GOV
MICHAEL HARRIS	CITY OF STOCKBRIDGE	770-389-7904	MHARRIS@CITYOFSTOCKBRIDGEGA.GOV
Anthony S. Ford	CITY OF STOCKBRIDGE	(678) 245-6142	AFORD@CITYOFSTOCKBRIDGEGA.GOV
David Simmons	Henry County DOT	(770) 288-7641	dsimmons@co.henry.ga.us
Kenneth Ford	GDOT/D3 Consult.	706-346-7508	kford@dot.ga.gov
Doug Young	GDOT Proj.	404-631-1779	mweiss@dot.ga.gov
Quinton L. Spann	GDOT Planning	404-631-1644	qspann@dot.ga.gov

From: Josh Earhart
To: kvanhouten@dot.ga.gov; Burgess, Aaron T <ABurgess@dot.ga.gov> (ABurgess@dot.ga.gov); Tommy Crochet; Josh Sofsky; leah vaughan (leahvaughan@sycamoreconsulting.net)
Cc: Natalie Glazer
Subject: PI# 322050, Henry/Clayton Countes -- Public Information Open House Synopsis
Date: Friday, July 29, 2016 4:44:54 PM

Hi everyone,

Below please find below a brief synopsis of last night's Open House. Please let me know if you have questions or concerns.

Brief Project Description	The proposed project would widen a 2.2 mile section of the road from two to four lanes between SR 138 in Henry County and I-675 in Clayton County, with a 20-foot concrete median serving as a divider. The shoulders would consist of 30-inch curb and gutter, a 6-foot landscaped grass strip, and a 10-foot wide multi-use trail on the east side with a 5-foot sidewalk on the west side of SR 42/US 23. The project would also include implementing a series of Restricted Crossing U-Turn (RCUTs) intersections. The overall objective of the proposed project is to provide increased efficiency and safety as traffic projections continue to rise on this main road.		
Date of Open House	July 28, 2016	*End of Comment Period*	August 8, 2016
Number in Attendance	60 people		
Media in Attendance	Press representative for Henry Herald news, Clayton News, and the Henry Neighbor Newspaper		
Officials in Attendance (list name and title)	➢ Anthony S. Ford – Mayor Pro Tem, City of Stockbridge ➢ Elton Alexander – Councilman, City of Stockbridge ➢ Hernitha "Neat" Robinson – Council Member, City of Stockbridge ➢ Scott Cumbie – Sergeant, Henry County Police Department ➢ Dale Hall – Administration and Community Services Director, City of Stockbridge ➢ Daniela Perry – Representative for Senator Johnny Isakson ➢ Blake Prince – County Commissioner, Henry County Board of Commissioners ➢ Dana Lemon – GDOT Board Member of the 13th District		
Comment Breakdown (for comments provided at the Open House) ➢ *Concerns about too much Right-of-Way (ROW) being taken* *Liberty Baptist Church* *The Hobby Shop* *Tony's Lawn Mower* ➢ *Concerns about access to buildings with new RCUTs and large median* ➢ *Desire to have screening vegetation placed around the detention pond* ➢ *Confusion/unrest about the location of the detention ponds*			

➢ *Concerns about the mosquito issues accompanying the proposed detention pond* ➢ *Concerns about the noise of construction during local church hours* ➢ *Safety concern about the use of only one lane at the intersection of Darrs Road and Old Atlanta Road (south of Walmart)* ➢ *Concerns about having the trail on either side of the road as opposed to just one side* ➢ *Desire to place landscaping within median and ROW* ➢ *Questions about whether public transportation stops such as MARTA or bus stops will be incorporated* ➢ *Desire to see ROW remnants used for public use* ➢ *Questions about whether amenities (benches, trash bins, bike racks, etc) will be planned along the road* ➢ *Desire to have a sidewalk installed along Old Atlanta Road* ➢ *Concerns about the lack of access points to the multi-use trail* ➢ *Desire to see the multi-foot path extended to Davison Prkwy* ➢ *Concerns about removing the traffic signal at Valley Hill Road*							
For	9	*Conditional*	4	*Uncommitted*	2	*Against*	3
Major concerns:		Access to businesses; aesthetics of stormwater ponds; mosquito control; increase limits of sidewalks and multi-use trail; parking and access loss; traffic signals					
Prepared by (include firm's name if applicable):		Edwards-Pitman					

Josh Earhart | Edwards-Pitman
Atlanta, GA | Main: 770.333.9484 | Direct: 678.932.2228
Columbia, SC | Main: 803.764.6883
Certified Women-Owned Small Business
jearhart@edwards-pitman.com | **www.edwards-pitman.com**

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0015090 **OFFICE** Design Policy & Support

Henry County
GDOT District 3 - Thomaston **DATE** 4/6/2018
Rock Quarry Road Widening – From
Eagles Landing Parkway to SR 42/SR
138

FROM Keith Posey for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED CONCEPT REPORT**

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Hiral Patel, Director of Engineering
Joe Carpenter, Director of P3
Albert Shelby, Director of Program Delivery
Darryl VanMeter, Assistant Director of P3/State Innovative Delivery Administrator
Kim Nesbitt, Program Delivery Administrator
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Eric Duff, State Environmental Administrator
Bill DuVall, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Monica Flournoy, State Materials Engineer
Patrick Allen, State Utilities Engineer
Benny Walden, Statewide Location Bureau Chief
Michael Presley, District Engineer
Adam Smith, District Preconstruction Engineer
Scott Parker, District Utilities Engineer
Ricardo Maxwell, Project Manager
BOARD MEMBER - 13th Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT

Project Type:	Widening	P.I. Number:	0015090
GDOT District:	3	County:	Henry
Federal Route Number:	N/A	State Route Number:	N/A
	Project Number:	N/A	

This project serves to widen the existing Rock Quarry Rd. from Eagles Landing Pkwy to N Henry Blvd/SR 138/US 23/SR 42.

Submitted for approval:

[signature], Croy Engineering LLC — Consultant Designer & Firm — Date: 12-22-2017

[signature] — Local Government Sponsor — Date: 12-21-

[signature] Kimberly W. Y Jobbett — State Program Delivery Administrator — Date: 1-19-1

[signature] C.L.B. — GDOT Project Manager — Date: 12-11-17

Kimberly W. Y Jobbett 1-19-18

Recommendation for approval

ERIC DUFF*/EKP — State Environmental Administrator — Date: 2/15/2018

FOR CHRISTINA BARRY*/EKP — State Traffic Engineer — Date: 3/23/2018

FOR ERIK ROHDE*/EKP — Project Review Engineer — Date: 3/21/2018

FOR KERRY GORE*/EKP — State Utilities Engineer — Date: 3/12/2018

MICHAEL PRESLEY*/EKP — District Engineer — Date: 3/16/2018

BILL DUVALL*/EKP — State Bridge Engineer — Date: 3/24/2018

1-19-18

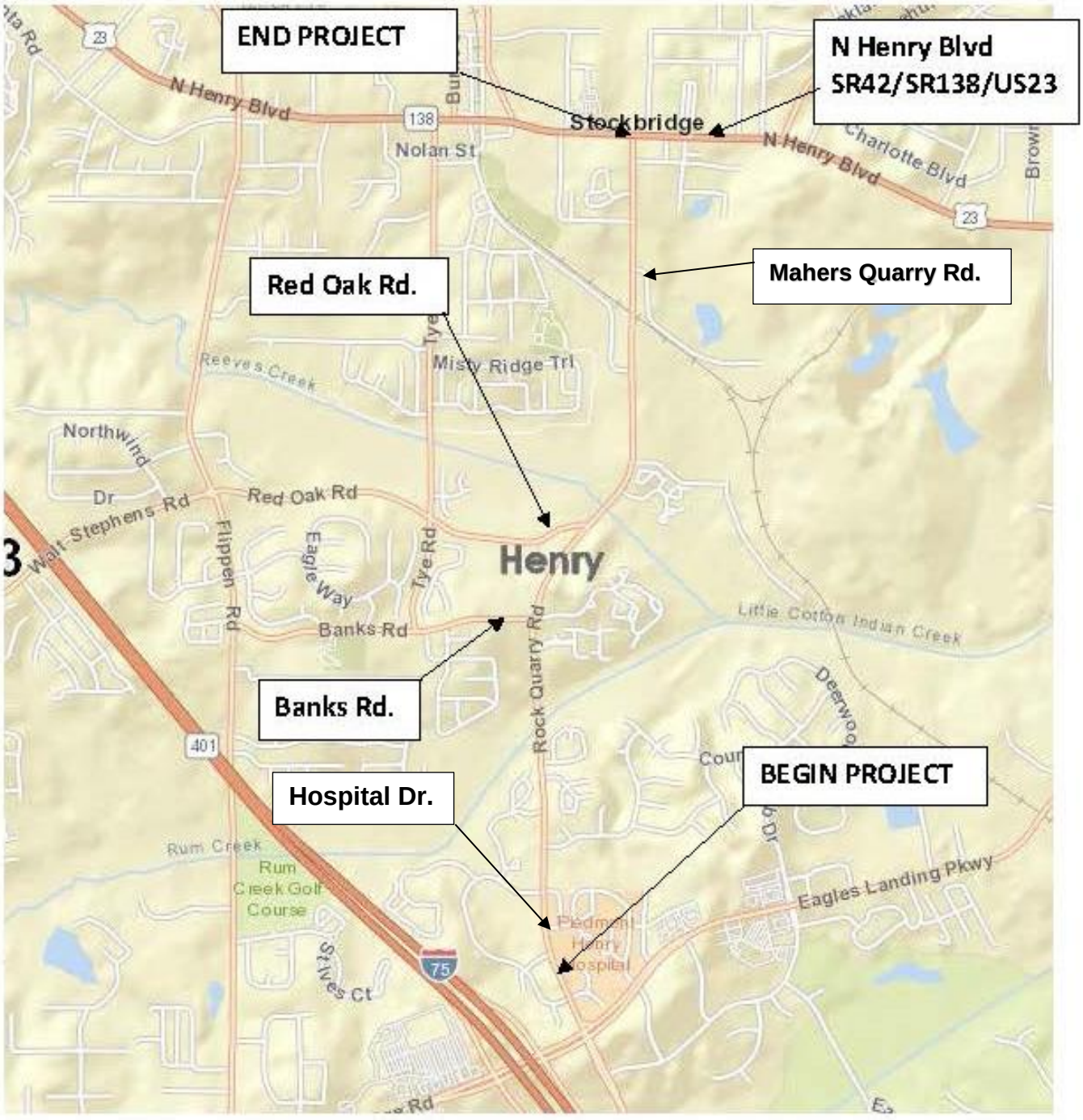
☒ MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).

☐ Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

CINDY VAN DYKE*/EKP — State Transportation Planning Administrator — Date: 1/26/2018

*- RECOMMENDATION ON FILE

PROJECT LOCATION MAP



PLANNING AND BACKGROUND

Project Justification Statement: Rock Quarry Road in Henry County is classified as an urban minor arterial. It is a two lane north-south facility that connects motorists from SR 42 to Eagles Landing Parkway. Rock Quarry Road has intermittent turn lanes at various locations and has no continuous linear sidewalks. There is a large number of commercial and industrial businesses along the proposed project segment, as well as residential housing. This project is currently identified in the Atlanta Regional Commission's (ARC) Regional Transportation Plan (RTP), Plan 2040, and is included in the Transportation Improvement Program (TIP). This project is located within the Atlanta MPO boundary and is listed in the TIP as HE-161A.

The current, 2016, AADT on Rock Quarry Road ranges between 12,630 and 21,008. The corresponding level of service (LOS), as calculated in HCS 2010, is LOS "E". This corridor was also analyzed in the Atlanta region's travel demand model (Year 2044, no build) to project future conditions if no changes are made. The projected 2044 (no build) traffic volumes for this corridor range between 17,732 and 29,495 with a corresponding projected LOS "E".

Other major projects in the vicinity of this project include: Rock Quarry Road Extension (new alignment) from SR 138/US 23 to the intersection of E. Atlanta Rd and Valley Hill Road, East Atlanta Road widening from Valley Hill Road to Fairview Road, Patrick Henry Parkway widening from Jodeco Road to Eagles Landing Parkway; Eagles Landing Parkway widening from Eagles Pointe Pkwy to US 23, and Western Parallel Connector (new alignment) from Hudson Bridge Road to Jonesboro Road.

The project was originated by Henry County, which recently removed an at-grade railroad crossing along Rock Quarry Road with the construction of a new 4-lane bridge over the Norfolk Southern railroad. The new structure was designed and built to accommodate the future widening proposed by this project. The County seeks to increase the capacity of the corridor to reduce congestion and improve mobility for its users, including pedestrians and cyclists. In addition to reducing congestion, the project will correct some geometric deficiencies to improve both intersection and stopping sight distance. Also, an improved pavement section will be designed to withstand the heavy truck traffic, especially at the north end of the project. This project is aligned with the goals and objectives in the Statewide Transportation Plan and the Atlanta Regional Commission's Plan 2040 by aiming to improve access to jobs, reduce congestion costs, and focus on the region's strategic priority transportation system. The purpose of the project is to reduce congestion, accommodate existing and future projected traffic and improve access to SR 42 and Eagles Landing Pkwy.

Existing conditions: Rock Quarry Road is a rural section consisting of two 11- foot lanes and grass shoulders.

Other projects in the area:

PROJECT ID:	COUNTY	Route/Street	DESCRIPTION	COORDINATION
Atlanta Region's Plan RTP- HE-109	Henry	Rock Quarry Rd.	Rock Quarry Rd. Extension- New Alignment from SR 138/US 23 to intersection of E Atlanta Rd. and Valley Hill Rd.	YES
Atlanta Region's Plan RTP- HE-137	Henry	E Atlanta Rd.	East Atlanta Rd. widening from Valley Hill Rd. to Fairview Rd.	NO
Atlanta Region's Plan RTP- HE-132C	Henry	Eagles Landing Pkwy	Eagles Landing Pkwy widening from Eagles Pointe Pkwy to US 23	NO
Atlanta Region's Plan RTP- HE-165B	Henry	Patrick Henry Pkwy	Patrick Henry Pkwy widening from Jodeco Rd to Eagles Landing Pkwy	NO
GDOT PI# 0014482	Henry	New Alignment	Western Parallel Connector- New Alignment from Hudson Bridge Rd to Jonesboro Rd	NO

MPO: Atlanta TMA **TIP #:** HE-161A

Congressional District(s): 13

Federal Oversight: ☐ PoDI ☒ Exempt ☐ State Funded ☐ Other

Projected Traffic: ADT 24 HR T: 8.5 %
Current Year (2016): 17,475 Open Year (2024): 18,875 Design Year (2044): 30,175
Traffic Projections Performed by: *Croy Engineering, LLC.*
Date approved by the GDOT Office of Planning: 6/2/17

Functional Classification (Mainline): Urban Minor Arterial Street

Complete Streets - Bicycle, Pedestrian, and/or Transit Standard Warrants:

Warrants met: ☐ None ☒ Bicycle ☒ Pedestrian ☐ Transit

Bicycle accommodations are required by standard warrant #3- Bicycle accommodations shall be considered in all planning studies and shall be included in all reconstruction, new construction, and capacity-adding projects that are located in areas with any of the following conditions:

3. along project alignments with bicycle travel generators and destinations (i.e. residential neighborhoods, commercial centers, schools, colleges, scenic byways, public parks, transit stops/stations, etc.)

- Bicycle warrants are to be met with a 10' Multi-Use Path on the East side of the Roadway.

Pedestrian accommodations shall be considered in all planning studies, and be included in all reconstruction, new construction, and capacity-adding projects which include curb and gutter as part of an urban border area. Pedestrian accommodations shall also be considered along roadways with rural shoulders, which meet any of the following conditions:

1. along corridors with pedestrian travel generators and destinations (i.e. residential neighborhoods, commercial areas, schools, public parks, transit stops and stations, etc.), or areas where such generators and destinations can be expected prior to the design year of the project;

- Pedestrian Warrants are being met with a 10' Multi-Use Path on the East side of the Roadway and a 5' sidewalk on the West Shoulder of the Roadway.

County: Henry

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? ☒ No ☐ Yes

Pavement Evaluation and Recommendations

Initial Pavement Evaluation Summary Report Required?	☒ No	☐ Yes	
Initial Pavement Type Selection Report Required?	☐ No	☒ Yes	
Feasible Pavement Alternatives:	☐ HMA	☐ PCC	☒ HMA & PCC

Pavement Type Selections shall be completed/submitted prior to Preliminary Plans, during Preliminary Design.

DESIGN AND STRUCTURAL

Description of the proposed project: The proposed project will take place in the city of Stockbridge and will consist of widening Rock Quarry Road beginning at Eagles Landing Parkway and ending at North Henry Boulevard/SR 138/US 23/SR 42. The mainline will be widened from the existing 2 lanes to a 4-lane roadway with a raised median. The mainline measures approximately 2.45 miles from begin of project to end of project.

Major Structures: Rock Quarry Road

Structure	Existing	Proposed
Structure ID: 151-5120-0 Bridge on Rock Quarry Road over Norfolk Southern RR	-235' long and 81.5' deck width -Roadway Width 34.2' -curb/sidewalk width 5.5'	- Bridge shall remain 235' long with a 81.5' deck width - East edge of Bridge deck shall have a 8' shared use path on raised curb with a 7' buffer(5' sidewalk + 2' lane offset) between roadway and pedestrian/bike traffic - 5.5' raised median offset 2' from travel lanes - 2 - 12' outside travel lanes and 2 11' inside travel lanes - West Edge shall retain the 5.5' of existing sidewalk
Structure ID: 151-5018-0 4-Barrel Box Concrete Culvert At Rum Creek	-Culvert (10' X 9' X 81') - 45° Skew - 4 Barrel Concrete Box Culvert	Proposed Extension of each end of Culvert.
Box Culvert – Just North of Rum Creek	- Culvert (5' X 6' X 65') - 0° Skew - Single Barrel Concrete Box Culvert	Proposed Extension of each end of Culvert.
Structure ID: 151-5019-0 3-Barrel Box Concrete Culvert At Reeves Creek	- Culvert (10' X 9' X 58') - 0° Skew - 3 Barrel Concrete Box Culvert	Proposed Extension of each end of Culvert.
~ Retaining Wall-just South of Rum Creek	*Grassed slope*	*~ 250' MSE Wall*
~ Retaining Wall-just North of Rum Creek Tributary(West Side of roadway)	*Grassed slope*	*~275' MSE Wall*
~ Retaining Wall-just North of Rum Creek Tributary(East side of roadway)	*Grassed slope*	*~675' Parapet Retaining Wall*

Mainline Design Features: ROCK QUARRY ROAD/URBAN MINOR ARTERIAL

Feature	Existing	Policy	Proposed
Typical Section:			
- Number of Lanes	2		4
- **Lane Width(s)**	**11'**	**11'-12'**	**11'/12'**
- **Median Width & Type**	**N/A**	**20'**	**20' RAISED**
- **Outside Shoulder Width**	**8'**	**10'**	**N/A**
- **Border Area Width**	**N/A**	**10'**	**12.5'/20'**
- **Outside Shoulder Slope**	**2%**	**2%**	**2%**
- **Inside Shoulder Width**	**N/A**	**N/A**	**N/A**
- **Sidewalks**	**N/A**	**5'**	**5'/10'**
- Auxiliary Lanes	N/A		N/A
- **Bike Accommodation**	**N/A**	**4'**	**10' MULTI-USE PATH**
Posted Speed	45 MPH		45 MPH
Design Speed	**N/A**	**30-60 MPH**	**45 MPH**
Minimum Horizontal Curve Radius	**711**	**711**	**1200**
Maximum Superelevation Rate	**6%**	**4%**	**4%**
Maximum Grade	**8%**	**7%**	**7%**
Access Control	N/A	**PERMITTED**	PERMITTED
Design Vehicle		**WB-40/BUS-40**	WB-67
Pavement Type	ASPHALT		HMA OR PCC

*According to current GDOT design policy if applicable

Is the project located on a NHS roadway? ☒ No ☐ Yes

Design Exceptions/Design Variances to FHWA or GDOT Controlling Criteria anticipated:

FHWA or GDOT Controlling Criteria	No	Undeter-mined	Yes	DE or DV	Approval Date (if applicable)
1. Design Speed	☒	☐	☐		
2. Design Loading Structural Capacity	☒	☐	☐		

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undeter--mined	Yes	Approval Date (if applicable)
1. Access Control	DP&S	☒	☐	☐	
2. Shoulder Width	DP&S	☒	☐	☐	
3. Intersection Sight Distance	DP&S	☒	☐	☐	
4. Intersection Skew Angle	DP&S	☒	☐	☐	
5. Tangent Lengths on Reverse Curves	DP&S	☒	☐	☐	
6. Lateral Offset to Obstruction	DP&S	☒	☐	☐	
7. Rumble Strips	DP&S	☒	☐	☐	
8. Safety Edge	DP&S	☒	☐	☐	
9. Median Usage	DP&S	☐	☐	☒	
10. Roundabout Illumination Levels	DP&S	☒	☐	☐	
11. Complete Streets Warrants	DP&S	☒	☐	☐	
12. ADA Requirements in PROWAG	DP&S	☒	☐	☐	
13. GDOT Construction Standards	DP&S	☒	☐	☐	
14. GDOT Drainage Manual	DP&S	☒	☐	☐	
15. GDOT Bridge & Structural Manual	Bridges	☒	☐	☐	

A design variance is anticipated for #9 Median Usage. To fit a minimum size shared-use path on the bridge we have reduced the total median width to 9.5' (5.5' raised). Policy requires a 20ft raised median for a proposed roadway with an ADT higher than 24,000 in the Design Year. The median shall be less than 20' in width for a total of 1,130' including the bridge.

VE Study anticipated: ☒ No ☐ Yes ☐ Completed – Date:

Lighting Required: ☒ No ☐ Yes

Off-site Detours Anticipated: ☒ No ☐ Undetermined ☐ Yes

Transportation Management Plan [TMP] Required: ☐ No ☒ Yes
If Yes: Project classified as: ☒ Non-Significant ☐ Significant
TMP Components Anticipated: ☒ TTC ☐ TO ☒ PI

INTERSECTIONS AND INTERCHANGES

Major Interchanges/Intersections: Intersection of Rock Quarry Road and N Henry Blvd/SR-42. A five lane section of SR-42 meets with the new 4-lane Rock Quarry Rd at a signalized T-intersection.

Intersection Control Evaluation (ICE) Required: ☐ No ☒ Yes

- *ICE Stage 1 – Screening Decision Record,*
- *Concurrence Request*
- *ICE Stage 2 – Alternative Selection Decision Record,*
- *Waiver Request*

Roundabout Peer Review Required: ☒ No ☐ Yes ☐ Completed – Date:

UTILITY AND PROPERTY

Railroad Involvement: A Norfolk Southern-owned railroad line crosses the project and will require coordination. The bridge on Rock Quarry Rd that spans over the Norfolk Southern Railroad tracks shall be modified to add a median to separate the opposing directions of travel and to add additional sidewalk onto the bridge deck. A detention basin will also be placed near Norfolk Southern Railroad ROW.

Utility Involvements: Atlanta Gas Light Clayton, ATT/D Telecom, Charter Communications Telecom, Comcast Communications Telecom, Clayton County Water Authority, Georgia Power, Henry County Water, Henry County Sewer, City of Stockbridge Water, City of Stockbridge Sewer, Tower Cloud, Inc. Telecom

SUE Required: ☐ No ☒ Yes ☐ Undetermined

Public Interest Determination Policy and Procedure recommended: ☒No ☐Yes

Right-of-Way (ROW): Existing width: 50-100ft. Proposed width: 100-150ft.
Required Right-of-Way anticipated: ☐None ☒Yes ☐Undetermined
Easements anticipated: ☐None ☒Temporary ☒Permanent ☒Utility ☐Other

Anticipated total number of impacted parcels: 81
Displacements anticipated: Businesses: N/A
Residences: 1
Other:
Total Displacements: 1

Location and Design approval: ☐ Not Required ☒ Required

Impacts to USACE property anticipated: ☐ No ☐ Yes ☒ Undetermined

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: Due to the abundance of residential neighborhoods and apartment complexes the need for pedestrian improvements along Rock Quarry Road has been brought up as an issue of concern; also there are plans for the corridor to tie into a future trail system throughout Henry County.

Context Sensitive Solutions Proposed: The new roadway will contain both pedestrian and bicycle accommodations, the west side of Rock Quarry Road will feature a 5 ft. sidewalk and the east side will feature a 10 ft. multi-use trail. Coordination with Henry County shall be done to ensure the multi-use path conforms to plans for future trail systems.

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

NEPA: ☐ PCE ☒ CE ☐ EA-FONSI ☐ EIS

GEPA: ☐ Type A ☐ Type B ☐ EER ☐ None

Level of Environmental Analysis:

☒ The environmental considerations noted below are based on preliminary desktop or screening level environmental analysis and are subject to revision after the completion of resource identification, delineation, and agency concurrence.

☐ The environmental considerations noted below are based on the completion of resource identification, delineation, and agency concurrence.

Water Quality Requirements:

MS4 Permit Compliance – Is the project located in a MS4 area? ☐ No ☒ Yes

Is Non-MS4 water quality mitigation anticipated? ☒ No ☐ Yes

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/Variance/Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	☒	☐	
2. Forest Service/NPS	☒	☐	
3. CWA Section 404 Permit	☐	☒	
4. Tennessee Valley Authority Permit	☒	☐	
5. 33 USC 408 Decision	☒	☐	
6. Buffer Variance	☒	☐	
7. Coastal Zone Management Coordination	☒	☐	
8. NPDES	☐	☒	
9. FEMA	☐	☒	
10. Cemetery Permit	☒	☐	
11. Other Permits	☒	☐	
12. Other Commitments	☒	☐	
13. Other Coordination	☒	☐	

Is a PAR required? ☒ No ☐ Yes ☐ Completed – Date:

- *Proposed Walls listed in the Major Structures box were added to avoid Wetland impacts.*
- *2:1 slopes were used near stream crossings to limit the amount of stream impacts required for culvert extensions.*

Environmental Comments and Information:

NEPA/GEPA: Special studies still in progress; no significant environmental issues anticipated; no Section 4(f) resources identified in project area.

Ecology: The Ecology Survey is not yet complete. Protected species and/or habitat not anticipated. Will require seasonal surveys. Three stream crossings: Rum Creek, Reeves Creek, and 1 unnamed tributary. Five potential wetlands.

History: History Survey complete. Three eligible resources anticipated.

Archeology: Archeology Survey complete. One potentially eligible resource anticipated; however, no impacts to the potential resource are anticipated. One cemetery in project area; however, no impacts are anticipated.

Air Quality:

Is the project located in an Ozone Non-attainment area?	☐ No	☒ Yes
Is a Carbon Monoxide hotspot analysis required?	☐ No	☒ Yes

A Type I analysis is not yet complete. The proposed project concept conforms to the plan's model description. The project would extend approximately from Eagles Landing Parkway to SR 42/SR 138 for a total length of 2.45 miles; widen the existing roadway from 2 lanes to 6 lanes; and would open to traffic by network year 2030. The proposed project is included in the Region's Air Quality Conformity Analysis.

Noise Effects: Study not yet complete. Noise barrier analysis requirement anticipated. Mitigation not anticipated

Public Involvement: Meetings with individual stakeholders such as hospital, homeowners associations, and Chamber of Commerce followed by one Public Information Open House.

Major stakeholders: Traveling Public, Henry County, the City of Stockbridge, and GDOT.

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: No issues are known at this time that would affect the constructability or construction schedule of the project.

Early Completion Incentives recommended for consideration: ☒ No ☐ Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Federal Aviation Administration (FAA) coordination anticipated: ☒No ☐ Yes

Initial Concept Meeting: The Initial Concept Meeting was held on November 16, 2016. The project schedule, no-build criteria, and project concerns were discussed. The preferred option, Rock Quarry Rd. widening from 2-lane to 4-lane roadway with raised median, was chosen. The minutes have been added as an attachment to this document.

Concept Meeting: The Concept Team Meeting was held on February 28, 2017. The meeting was located at the GDOT Main Office, 600 W. Peachtree St NW, Atlanta, GA.

Other coordination to date: Kick-Off Meeting September 8, 2016; Traffic Operations Meeting September 27, 2016; Stakeholders Meetings February 8, 2017

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Croy Engineering
Design	Croy Engineering
Right-of-Way Acquisition	Henry County
Utility Coordination (Preconstruction)	Henry County
Utility Relocation (Construction)	Utility Owners
Letting to Contract	Henry County
Construction Supervision	Henry County
Providing Material Pits	N/A
Providing Detours	N/A
Environmental Studies, Documents, & Permits	Croy Engineering
Environmental Mitigation	Henry County
Construction Inspection & Materials Testing	Henry County

Project Cost Estimate Summary and Funding Responsibilities:

	PE Activities					
	PE Funding	Section 404 Mitigation	ROWΔ	Reimbursable Utilities^	CST*	Total Cost
Funded By	M230/Local	Local	Local	Local	Local	
$ Amount	$1,500,000.00	$225,000.00	$7,171,200.00	$2,180,000.00	$20,599,004.02	$31,675,204.02
Date of Estimate		9/26/2017	8/24/2017	3/08/2018	3/08/2018	

*CST Cost includes: Construction, Engineering and Inspection, Contingencies and Liquid AC Cost Adjustment.

^Reimbursable Utilities Cost includes Preliminary Railroad Cost for Surface Work

ΔROW includes costs for MS4 ROW for BMPs.

ALTERNATIVES DISCUSSION

Alternative selection: The preferred alternative is to widen Rock Quarry Rd. to four lanes and include restricted crossover U-turn(R-CUT) intersections at selected locations. The four lane option provides a better flow of traffic and less congestion for the build year and growth in future years. The no-build option is not viable due to the existing amount of traffic and congestion along Rock Quarry Rd. A 5-lane (14-ft flush median) option was not considered due to the design year ADT exceeding the ADT allowed (ADT 30,175 > 24,000) for a flush median and would not allow for the safety and capacity improvements that R-CUT intersections would offer. Implementation of a 5-lane (14-ft flush median) would require additional ROW to be purchased to incorporate a future 20-ft raised median, which we have already proposed.

Preferred Alternative: Rock Quarry Rd. 4-Lane raised median. This option will widen from a 2-lane undivided roadway to a 4- lane divided roadway with a 20 ft. raised median and restricted crossover U-turn (R-CUT) intersections. It requires three culvert extensions and a slight change in the horizontal alignment. This project also includes a multi-use path and sidewalk to provide more safety and mobility for bikers and pedestrians.

Estimated Property Impacts:	**81**	**Estimated Total Cost:**	**$31,675,204.02**
Estimated ROW Cost:	**$7,171,200.00**	**Estimated CST Time:**	**24 Months**

Rationale: This alternative adequately achieves the goal of increasing the mobility and accessibility of roadway to users, while at the same time providing improved safety for bikers/pedestrians. R-CUT intersections also provide more safety for roadway traffic at intersections.

No-Build Alternative: Maintain existing 2-lane undivided configuration on Rock Quarry Rd.

Estimated Property Impacts:	**0**	**Estimated Total Cost:**	**0**
Estimated ROW Cost:	**0**	**Estimated CST Time:**	**0**

Rationale: Due to the congestion and future developments along Rock Quarry Rd., the no-build alternative was not a viable option.

Alternative 1: Rock Quarry Rd. 5-Lane (14 ft flush median). This option will widen from a 2-lane undivided roadway to a 4- lane roadway with a 14 ft. flush median. It requires three culvert extensions and a slight change in the horizontal alignment. This project also includes a multi-use path and sidewalk to provide more safety and mobility for bikers/pedestrians.

Estimated Property Impacts:	**N/A**	**Estimated Total Cost:**	**N/A**
Estimated ROW Cost:	**N/A**	**Estimated CST Time:**	**N/A**

Rationale: A 5-lane (14-ft flush median) option was not considered due to the design year ADT exceeding the ADT allowed (ADT 30,175 > 24,000) for a flush median. Implementation of a 5-lane (14-ft flush median) would require additional ROW to be purchased to incorporate a future 20-ft raised median, which we have already proposed. The flush median option eliminates the option for R-CUT intersection and provides less safety for roadway traffic at intersections.

Comments: More Stakeholder meetings to be held with HOA in January 2019.

LIST OF ATTACHMENTS/SUPPORTING DATA

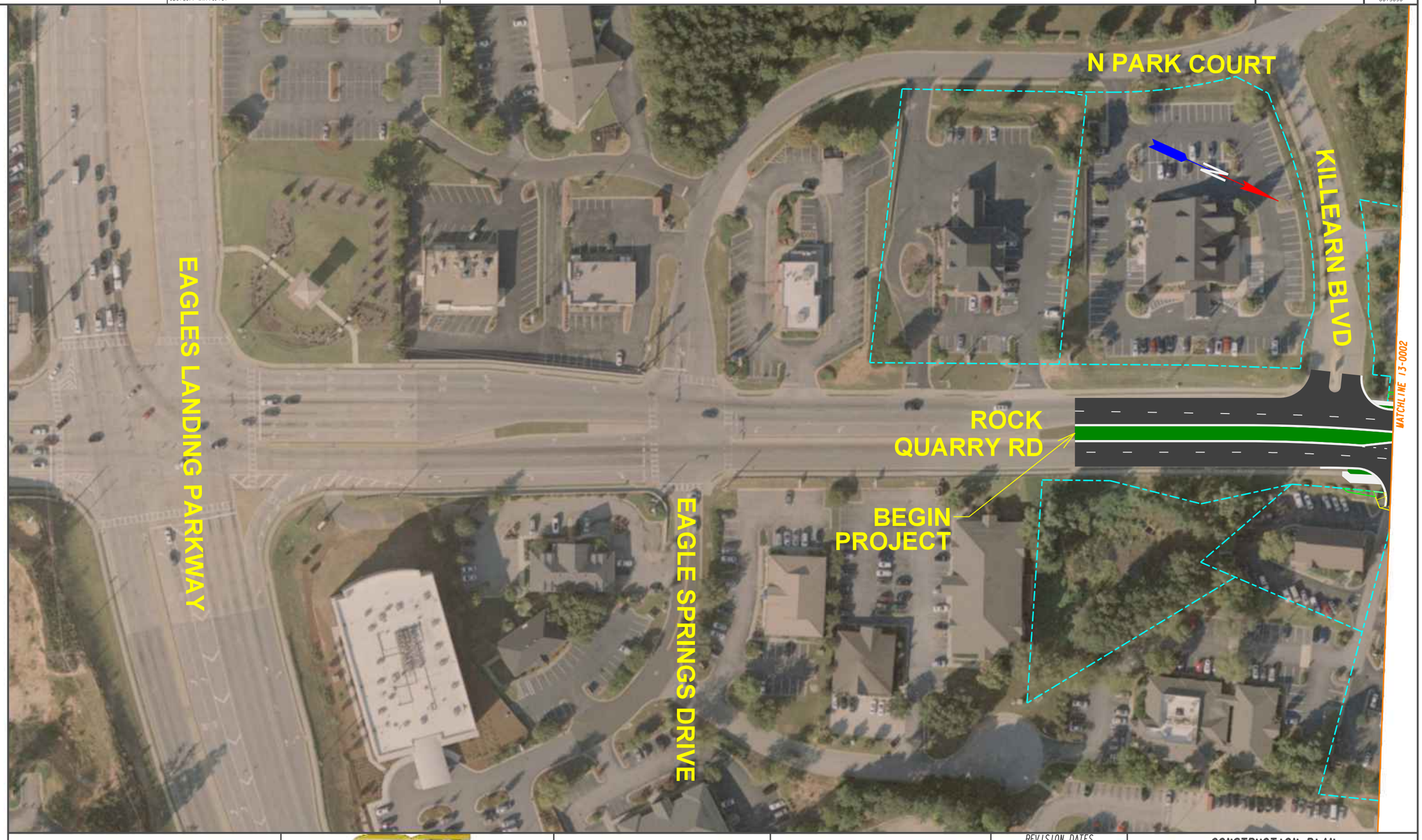
1. Concept Layout
2. Typical sections
3. Detailed Cost Estimates:
    a. Construction including Engineering and Inspection and Contingencies
    b. Completed Liquid AC Cost Adjustment forms
    c. Right-of-Way
    d. Utilities
    e. Environmental Mitigation
4. Crash summaries
5. Design Traffic diagrams
6. Capacity analysis summary *(tabular format)*
7. Summary of TE Study and/or Signal Warrant Analysis
8. ICE Report(s)
    a. Stage 1 Screening Decision Record
    b. Concurrence Memo
    c. Stage 2 Alternative Selection Decision Record
    d. Waiver Request
9. Concept Level Hydrology Study for MS4 Permit
    a. PLE Evaluation from the MS4 Concept Report Summary
    b. MS4 Drainage Area Layout
    c. MS4 ROW Cost estimate
10. Pavement studies *(e.g. Initial Pavement Type Selection Report, etc.)*
    a. Flexible Pavement Design Analysis
11. Minutes of Concept meetings
12. Minutes of any meetings that shows support or objection to the concept
    a. Summary of Stakeholder Meetings
    b. Public Involvement Log
    c. PIOH Summary of Comments & Summary of Response Letter
13. *Other items referred to in the body of the report as applicable*
    a. FHWA Correspondence on Environmental Document

APPROVALS

Concur: _____
Director of Engineering

Approve: Margaret B. Pirkle _____ 3/30/18
Chief Engineer Date

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LEGEND

- PROPOSED EDGE OF PAVEMENT
- PROPERTY AND EXISTING R/W LINE
- PROPOSED CONCRETE MEDIAN / DRIVEWAY
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GDOT Georgia Department of Transportation

HENRY COUNTY GA 1821

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REVISION DATES

CONSTRUCTION PLAN

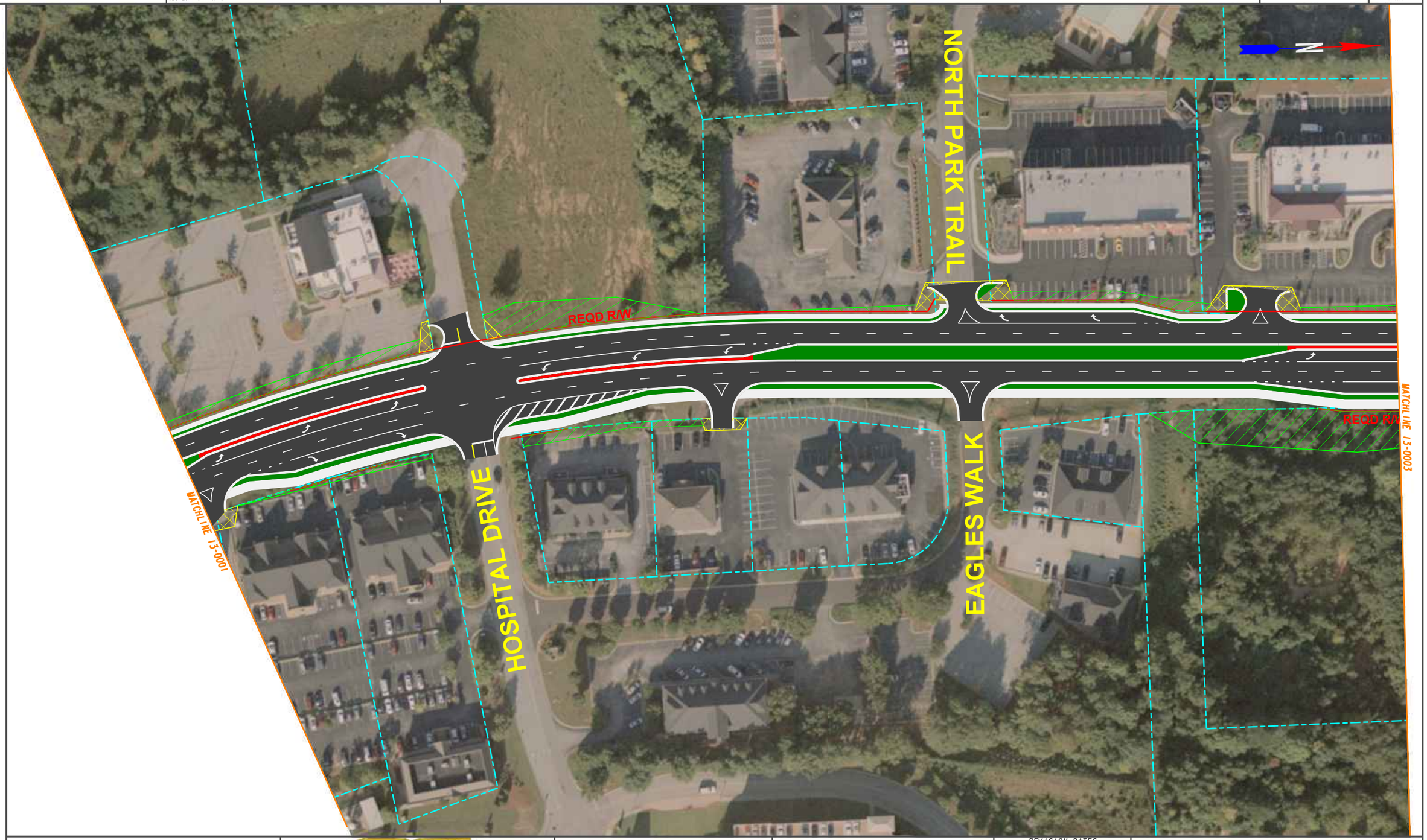
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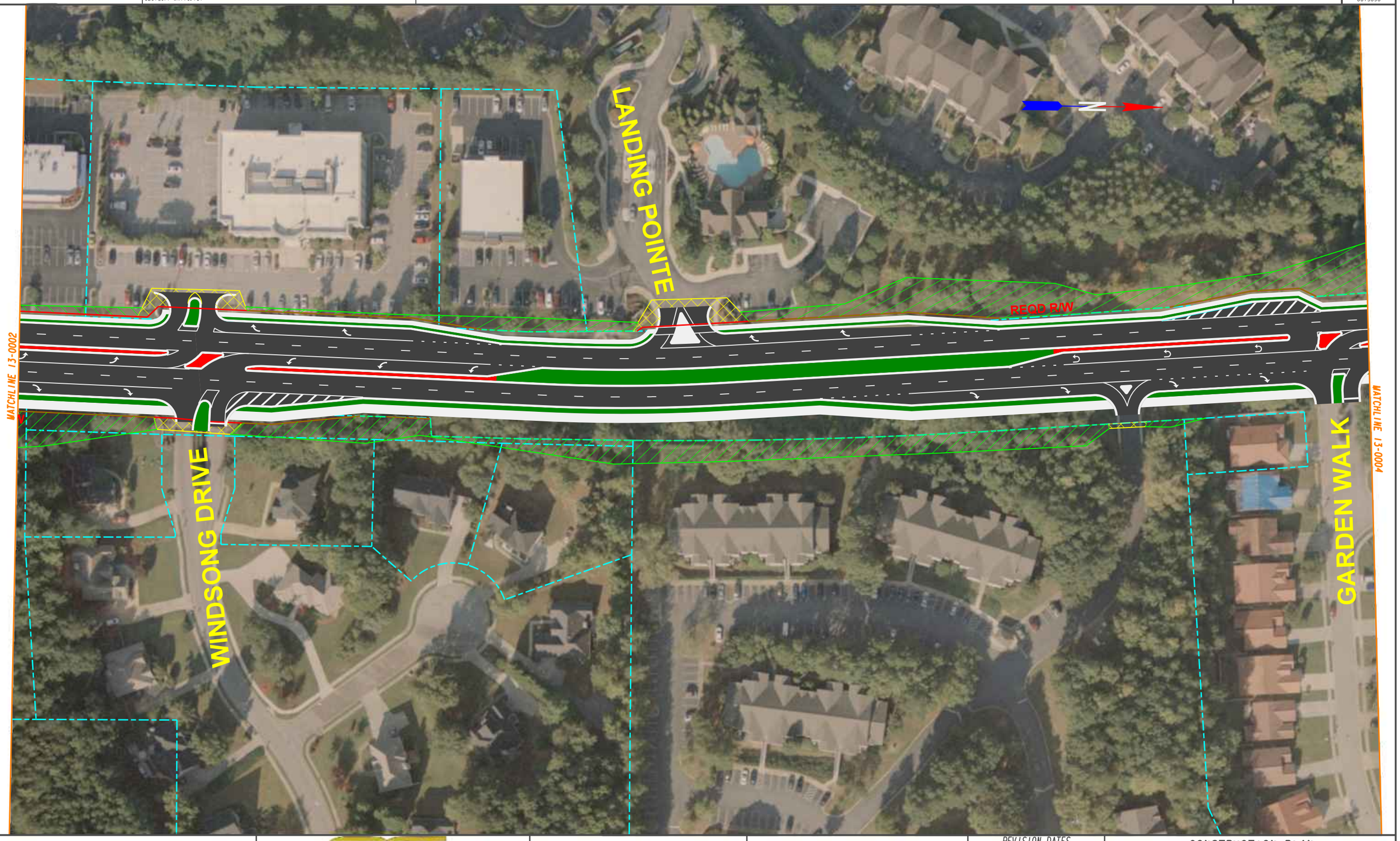
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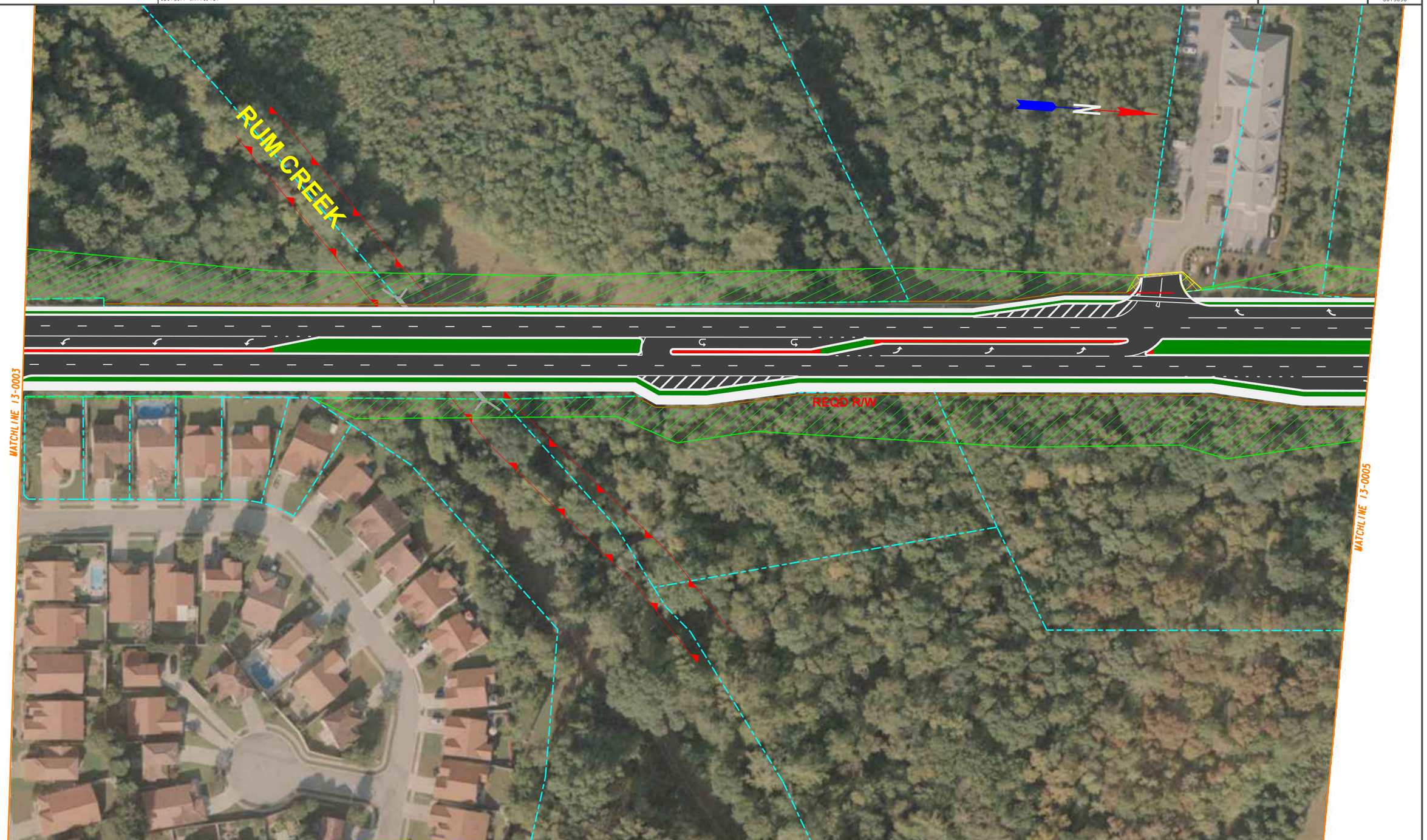
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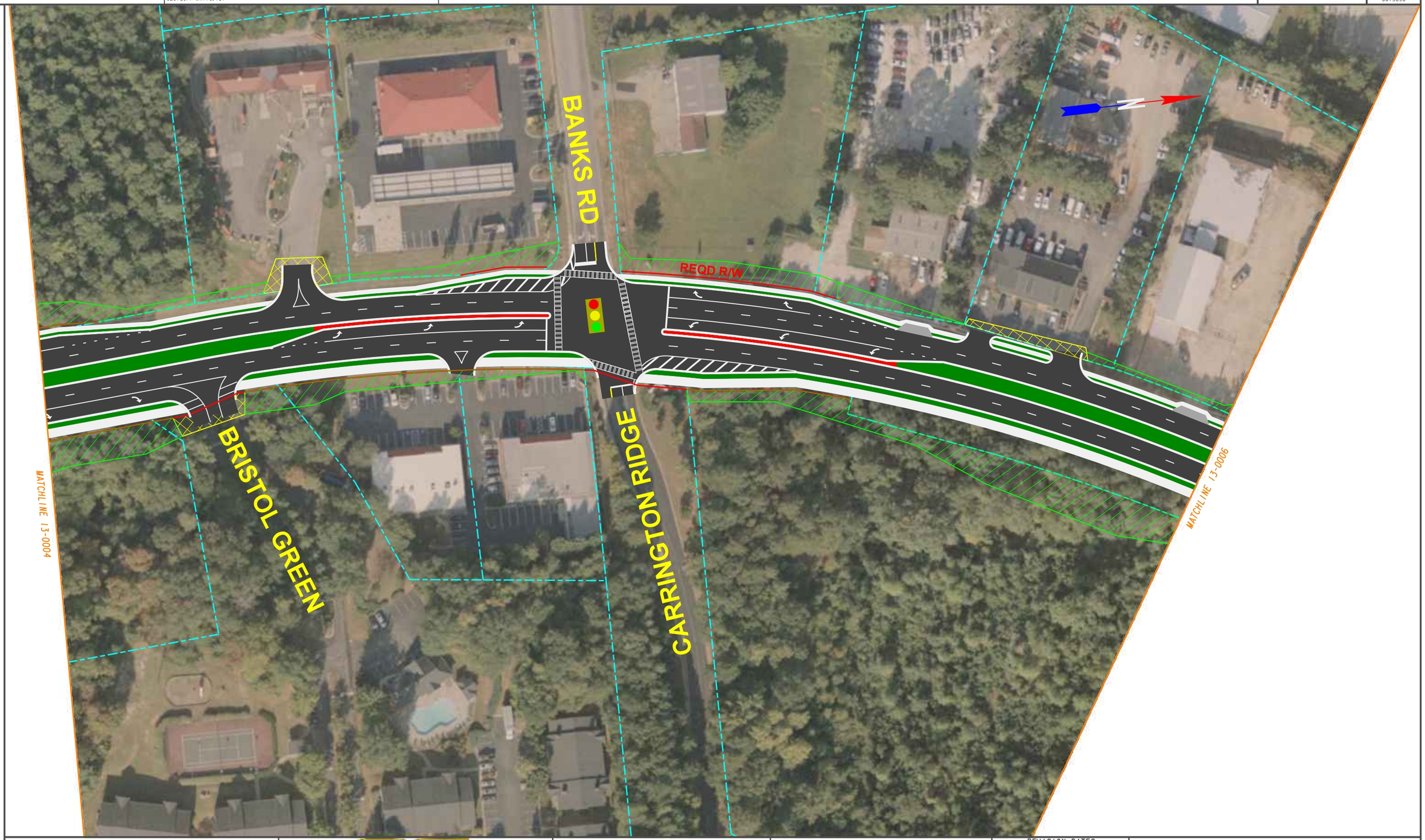
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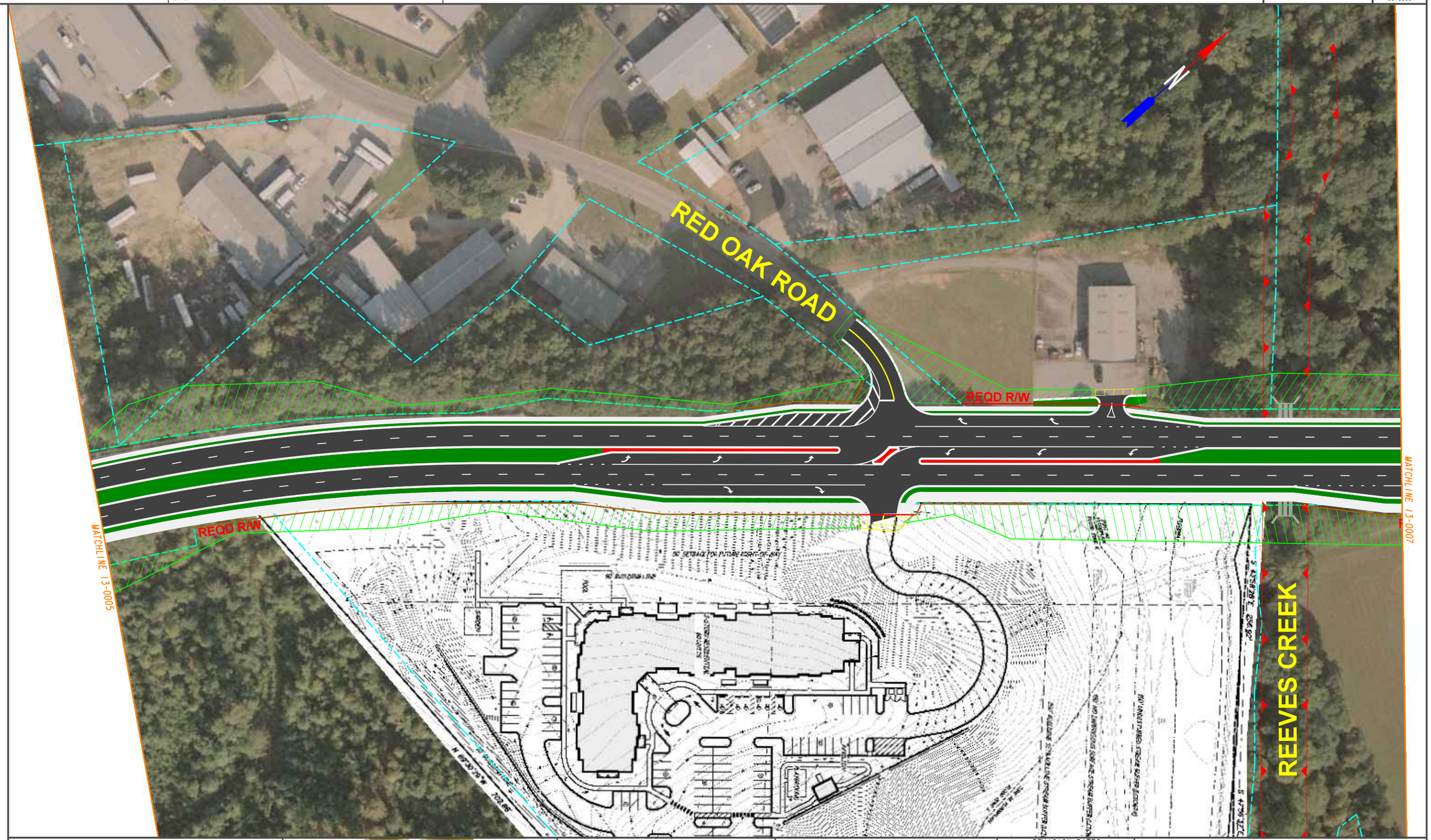
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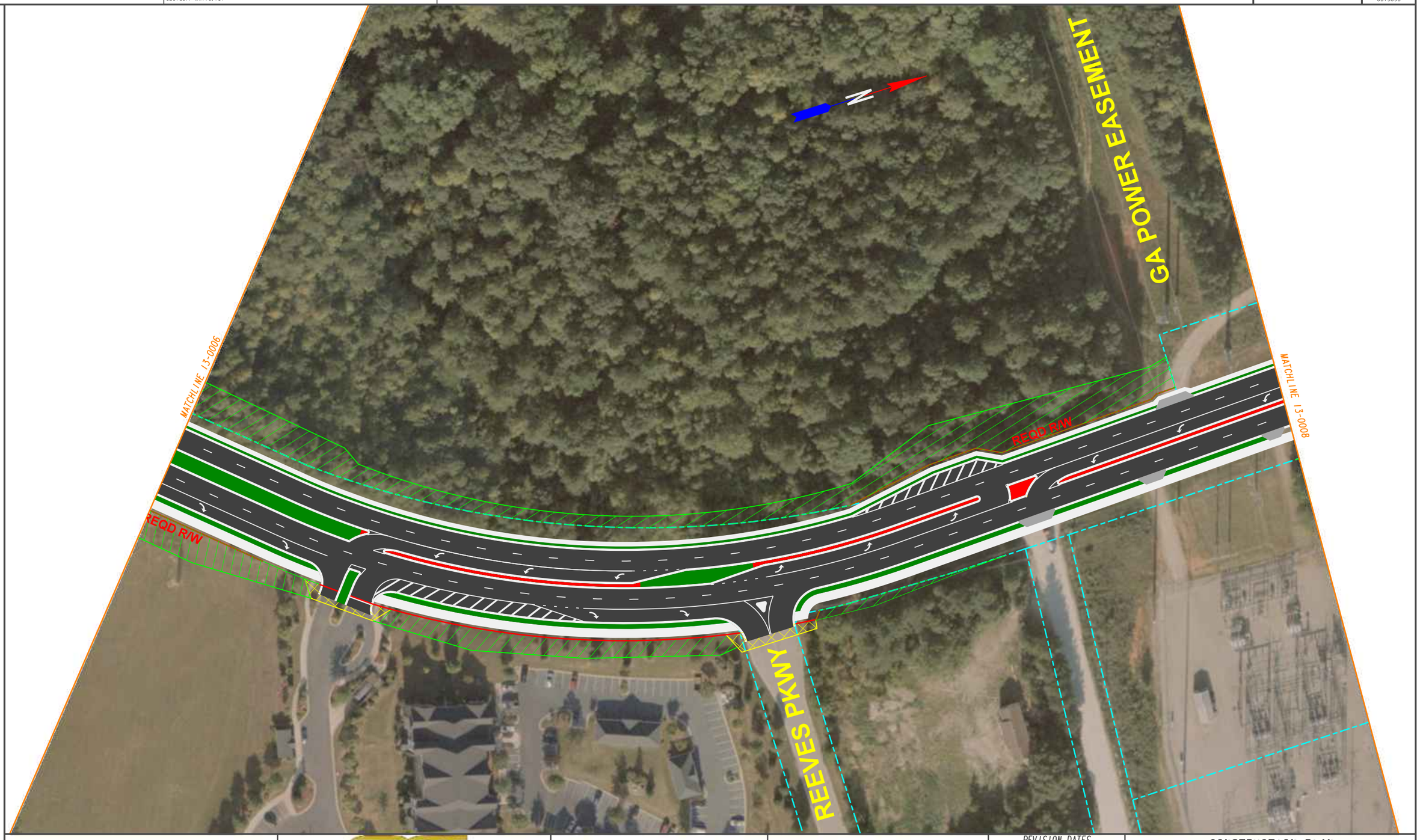
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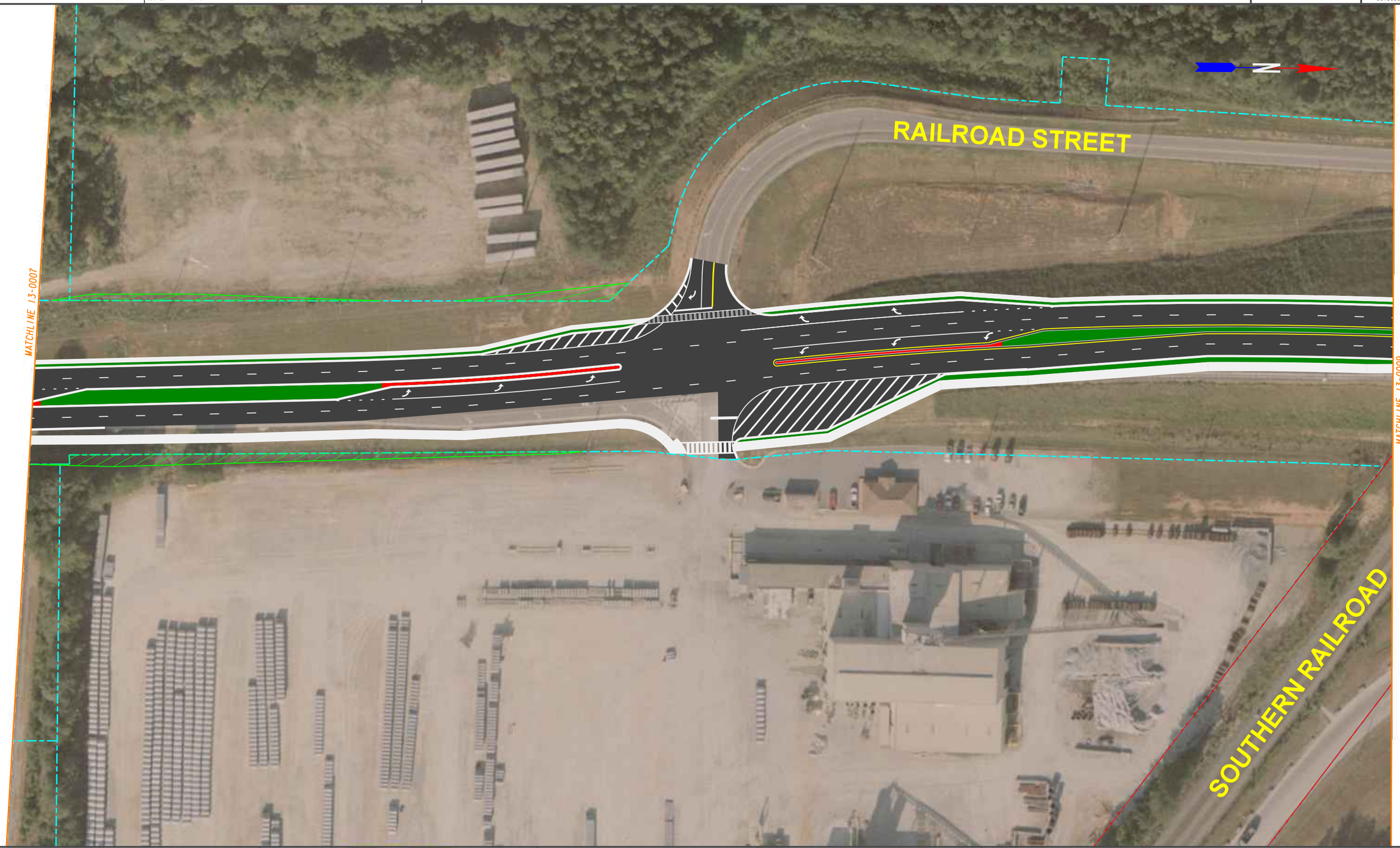
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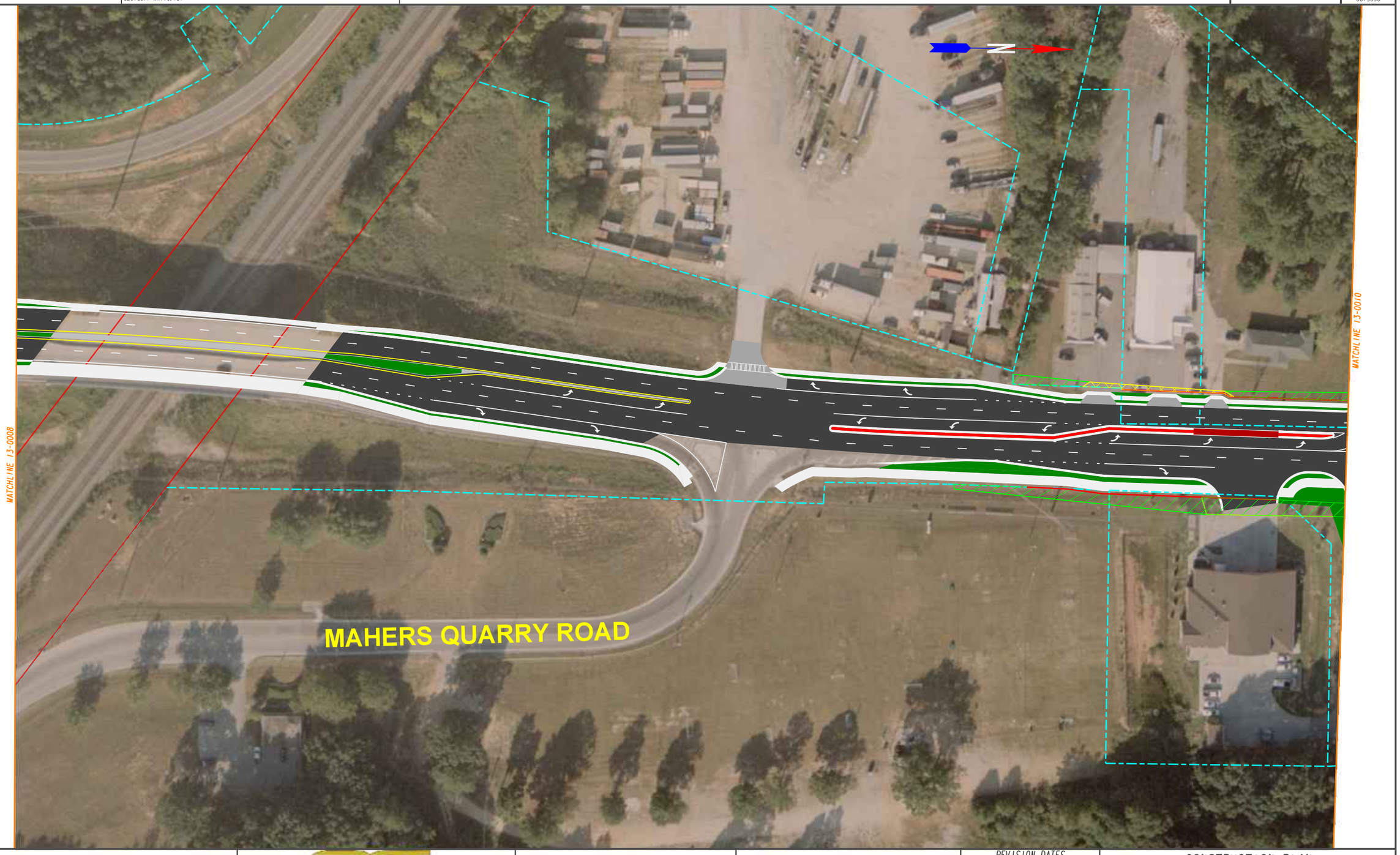
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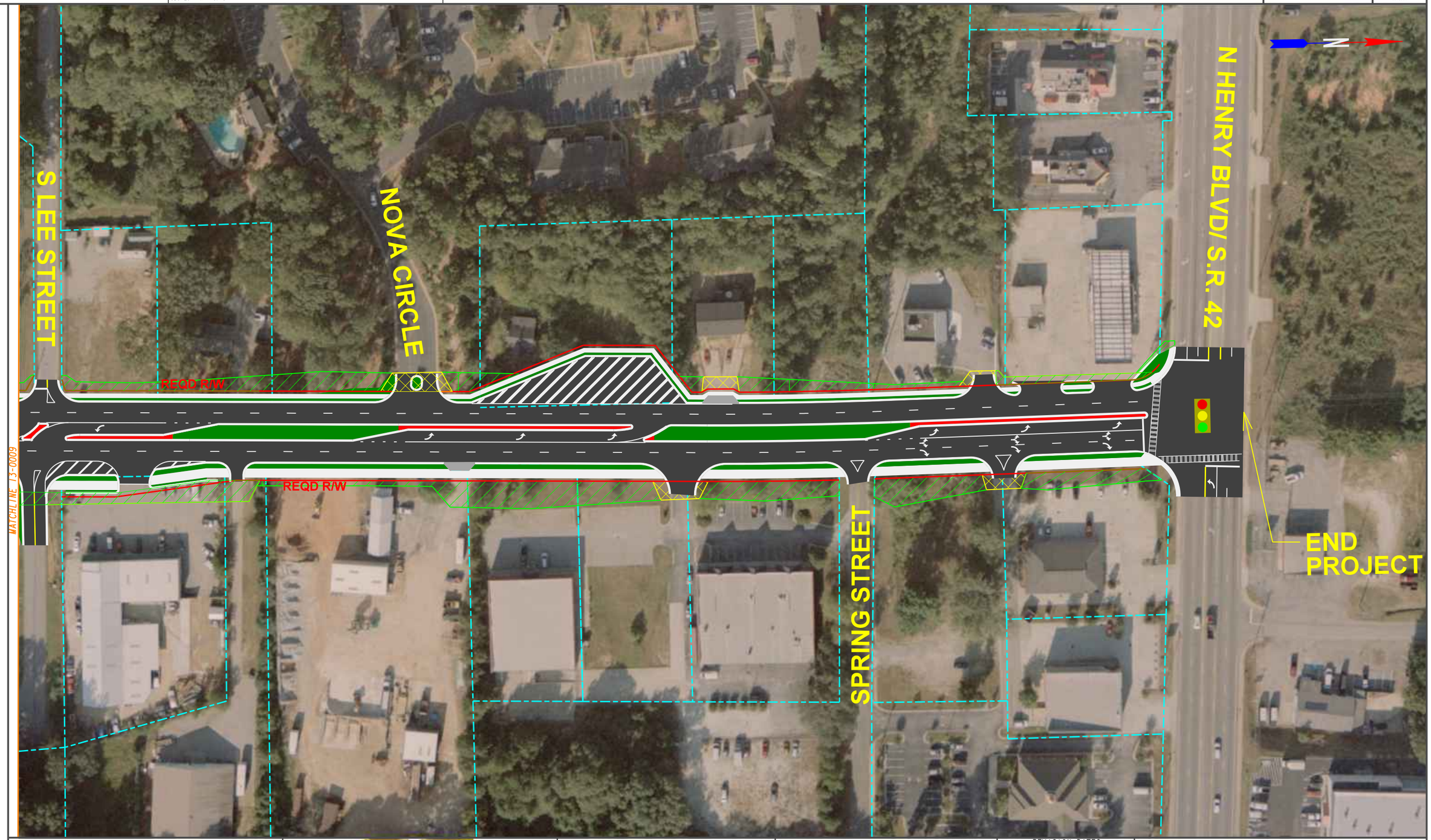
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ROCK QUARRY ROAD
CONCEPT

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		13-0009
CORRECTED:		DATE:		
VERIFIED:		DATE:		

10/23/2015 GPLN



LEGEND

- PROPOSED EDGE OF PAVEMENT
- PROPERTY AND EXISTING R/W LINE
- PROPOSED CONCRETE MEDIAN / DRIVEWAY
- PROPOSED GRASS STRIP / LANDSCAPING
- ESA 25' STREAM BUFFER

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

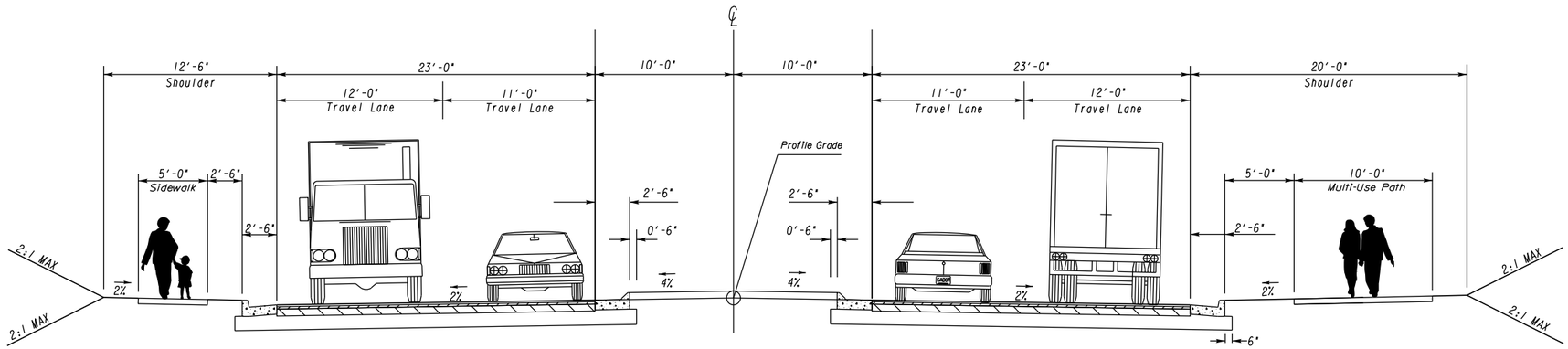
SCALE IN FEET
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REVISION DATES

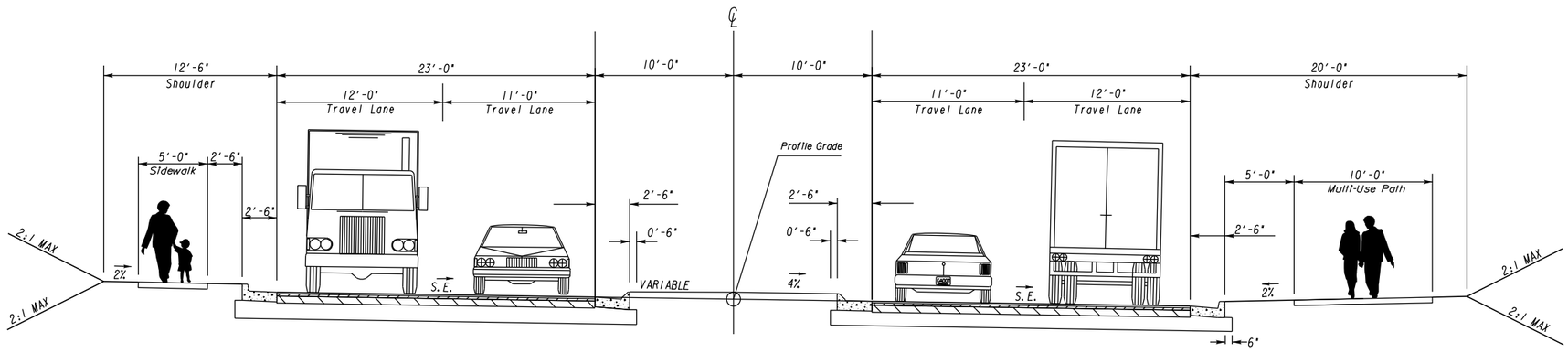
CONSTRUCTION PLAN
ROCK QUARRY ROAD
CONCEPT

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		13-0010
CORRECTED:		DATE:		
VERIFIED:		DATE:		

10/23/2015 GPLN



TS 01
ROCK QUARRY ROAD WIDENING
TANGENT SECTION



TS 02
ROCK QUARRY ROAD WIDENING
SUPERELEVATED SECTION

CROY ENGINEERING
Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

SCALE IN FEET
0 5 10 20

REVISION DATES

TYPICAL SECTIONS
ROCK QUARRY ROAD WIDENING

CHECKED:		DATE:	DRAWING No.
BACKCHECKED:		DATE:	05-0001
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. **0015090** **OFFICE** Program Delivery

PROJECT DESCRIPTION
Widening - Rock Quarry Road from north of Eagles Landing Road to SR42/SR138

DATE March 8, 2017

From: Albert V. Shelby, Division Director of Program Delivery

To: Lisa L. Myers, State Project Review Engineer
via Email Mailbox: **CostEstimatesandUpdates@dot.ga.gov**

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Ricardo Maxwell

MGMT LET DATE 9/15/2022

MGMT ROW DATE 6/15/2020

PROGRAMMED COSTS (TPro W/OUT INFLATION)			**LAST ESTIMATE UPDATE**	
CONSTRUCTION	**$**	27,247,882.81	DATE	8/8/2017
RIGHT OF WAY	**$**	7,171,200.00	DATE	8/24/2017
UTILITIES	**$**	3,675,000.00	DATE	8/8/2017

REVISED COST ESTIMATES

CONSTRUCTION*	**$**	20,599,004.02
RIGHT OF WAY	**$**	7,171,200.00
UTILITIES	**$**	2,140,000.00

*Cost Contains **20** % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

The updated construction, utility, & railroad costs are based on a preliminary layout since concept development is reaching the final stages. A 20% contingency was chosen because this is a reconstruction/rehabilitation project with added capacity & the concept report hasn't been approved yet. Please note, the parametric CES estimate was developed by Croy Engineering on behalf of Henry County but Croy also provided specific quantities to calculate fuel adjustments. For right-of-way, this is a no-change update. Henry County has submitted a right-of-way cost estimate, it has not been submitted for GDOT approval.

CONTINGENCY SUMMARY

A.	**CONSTRUCTION COST ESTIMATE:**	$ 15,995,130.88	Base Estimate From CES		
B.	**ENGINEERING AND INSPECTION (E & I):**	$ 799,756.54	Base Estimate (A) x	**5**	%
C.	**CONTINGENCY:**	$ 3,358,977.48	Base Estimate (A) + E & I (B) x	**20**	%
			See % Table in "Risk Based Cost Estimation" Memo		
D.	**TOTAL LIQUID AC ADJUSTMENT:**	$ 445,139.11	Total From Liquid AC Spreadsheet		
E.	**CONSTRUCTION TOTAL:**	$ **20,599,004.02**	(A + B + C + D = E)		

REIMBURSABLE UTILTY COSTS

UTILITY OWNER	REIMBURSABLE COST
See attached estimates (railroad & utility)	$ 2,140,000.00
TOTAL	**$ 2,140,000.00**

ATTACHMENTS: (File Copy in the Project Cost Estimate Folder)

CES Estimate
Fuel Adjustments
Utility Estimate
Railroad Estimate

JOB ESTIMATE REPORT

JOB NUMBER : 0015090_CONCEPT SPEC YEAR: 13
DESCRIPTION: ROCK QUARRY RD WIDENING
EAGLES LANDING PKWY TO N HENRY BLVD

COST GROUPS FOR JOB 0015090_CONCEPT

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
ERTHLS	EARTHWORK (LS)	1.000	4000000.00000	4000000.00	Y
TRFT	TRAFFIC CONTROL-TEMPORARY (LS)	1.000	300000.00000	300000.00	Y
DRNGEA	DRAINAGE (EA)	1.000	1000000.00000	1000000.00	Y
EROC	EROSION CONTROL (SY)	30000.000	20.00000	600000.00	Y
GENR	GENERAL/FIELD OFFICE/ETC (LS)	1.000	100000.00000	100000.00	Y
SIGNPCTO	SIGNS (PERCENT OF JOB)	60913.706	1.50000	91370.56	Y
ACTIVE COST GROUP TOTAL				6091370.56	
INFLATED COST GROUP TOTAL				6091370.56	

ITEMS FOR JOB 0015090_CONCEPT

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	18300.000	95.00	1738500.00
0010	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	7152.000	95.00	679440.00
0015	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	9145.000	95.00	868775.00
0020	310-5100		SY	GR AGGR BS CRS 10IN INCL MATL	91750.000	21.61	1982717.50
0025	432-0206		SY	MILL ASPH CONC PVMT/ 1.50 DEP	3560.000	2.76	9826.17
0030	441-0104		SY	CONC SIDEWALK, 4 IN	7170.000	57.00	408690.00
0035	441-0108		SY	CONC SIDEWALK, 8 IN	14340.000	75.00	1075500.00
0040	441-0754		SY	CONC MEDIAN, 7 1/2 IN	2850.000	55.33	157718.43
0045	441-4030		SY	CONC VALLEY GUTTER, 8 IN	250.000	61.08	15271.69
0050	441-6222		LF	CONC CURB & GUTTER/ 8X30TP2	25800.000	13.99	360946.90
0055	441-6740		LF	CONC CURB & GUTTER/ 8X30 TP7	25800.000	14.25	367834.47
0060	500-3115		LF	CLASS A CONCRETE, TYPE P2, RETAINING WAL	947.000	710.22	672578.34
0065	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	50.000	227.03	11351.73
0070	627-1010		SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 0015090	5700.000	52.32	298239.96
0075	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	62.000	83.28	5163.39
0080	653-0160		EA	THERM PVMT MARK, ARROW, TP 6	32.000	175.57	5618.24
0085	653-0170		EA	THERM PVMT MARK, ARROW, TP 7	8.000	144.08	1152.71
0090	653-0296		EA	THERMO PVMT MARKING,WORD,TP 15	4.000	225.63	902.55
0095	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	29660.000	0.57	17018.02
0100	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	23950.000	0.59	14281.15
0105	653-1704		LF	THERM SOLID TRAF STRIPE,24,WH	170.000	7.51	1278.13
0110	653-1804		LF	THERM SOLID TRAF STRIPE, 8,WH	13400.000	2.72	36570.07
0115	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	26150.000	0.47	12329.20
0120	653-6004		SY	THERM TRAF STRIPING, WHITE	3120.000	4.78	14928.54
0125	647-1000		LS	TRAF SIGNAL INSTALLATION NO - BANKS RD	1.000	120000.00	120000.00
0130	500-3002		CY	CL AA CONCRETE	970.000	938.19	910045.58

JOB ESTIMATE REPORT

0135	413-0750	GL	TACK COAT	12470.000	3.29	41026.30
0140	511-1000	LB	BAR REINF STEEL	98700.000	0.77	76056.25

ITEM TOTAL	9903760.32
INFLATED ITEM TOTAL	9903760.32

TOTALS FOR JOB 0015090_CONCEPT

ESTIMATED COST:	15995130.88
CONTINGENCY PERCENT (20.0):	3199026.18
ESTIMATED TOTAL:	19194157.06

PROJ. NO.		CALL NO.	
P.I. NO.	0015090		
DATE	3/8/2018		

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Mar-18	$ 2.431
DIESEL		$ 2.910
LIQUID AC		$ 416.00

Link to Fuel and AC Index:
http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)				**431770.56**	**$ 431,770.56**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	665.60	
Monthly Asphalt Cement Price month project let (APL)			$	416.00	
Total Monthly Tonnage of asphalt cement (TMT)				1729.85	

ASPHALT	Tons	%AC	AC ton
Leveling	0	5.0%	0
12.5 OGFC	0	5.0%	0
12.5 mm	7152	5.0%	357.6
9.5 mm SP	0	5.0%	0
25 mm SP	18300	5.0%	915
19 mm SP	9145	5.0%	457.25
	34597		**1729.85**

BITUMINOUS TACK COAT

Price Adjustment (PA)			**$**	**13,368.55**	**$ 13,368.55**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	665.60	
Monthly Asphalt Cement Price month project let (APL)			$	416.00	
Total Monthly Tonnage of asphalt cement (TMT)				53.5599085	

Bitum Tack Gals	gals/ton	tons
12470	232.8234	53.5599085

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				**0**	**$ -**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	665.60	
Monthly Asphalt Cement Price month project let (APL)			$	416.00	
Total Monthly Tonnage of asphalt cement (TMT)				0	

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT	**$ 445,139.11**

COST TOTALS VIA ARC CHART			
	RESIDENTIAL	**COMMERCIAL**	**INDUSTRIAL**
RIGHT-OF-WAY	$142,704	$1,520,958	$79,508
EASEMENT	$71,625	$1,301,653	$25,181
TOTALS	**$214,329**	**$2,822,611**	**$104,688**

SUBTOTAL		$3,141,628
Conditional %	4	$125,665
Damages %	20	$628,326

Valuation Services		
Estimated Fees (per Parcel)	$5,000	$420,000
Updates & Incidentals (%)	25	$105,000

Legal Services	(per Parcel)	
Attorney Meeetings	$125	$10,500
Preliminary Titles	$200	$16,800
Closing & Final Title	$300	$25,200
Recording Fees	$50	$4,200

Administrative	(hrs/Parcel)	$150.00/hr
Pre-acquisition	40	$504,000
Acquisition	100	$1,260,000

TOTAL ESTIMATED COST	**$6,241,319**

TOTAL + MS4 ROW	**$7,171,185**

ARC CHART (COST PER AC)				
	COMMERCIAL	**RESIDENTIAL**	**AGRICULTURAL**	**INDUSTRIAL**
HENRY CO	$350,000.00	$50,000.00	$15,000.00	$75,000.00

NOTES:

1. Easement cost is multiplied by a factor of 0.75
2. Area multiplied by Arc Chart to get cost

UTILITY		OVERHEAD			UNDERGROUND			% Reimbursable	TOTAL (Reimbursable)	TOTAL (Non-Reimbursable)
		No. of Poles	Rate (per pole)	Subtotal	Linear Feet	Rate (per LF)	Subtotal			
Electric										
Ga. Power	Pole	50.00	25,000.00	1,250,000.00	5200.00		-	100.00%	1,250,000.00	-
Other	Pole	3.00	185,000.00	555,000.00				100.00%	555,000.00	
Cable TV		50.00	3,000.00	150,000.00		4.00	-		-	150,000.00
Telephone		50.00	3,000.00	150,000.00	15000.00	50.00	750,000.00		-	900,000.00
Gas					18500.00	25.00	462,500.00		-	462,500.00
Water										
	6" DIP					60.00	-		-	-
	8" DIP				12000.00	75.00	900,000.00	29.44%	265,000.00	635,000.00
Sewer										
	6" DIP				2000.00	90.00	180,000.00	0.00%	-	180,000.00
	8" DIP				7500.00	100.00	750,000.00	9.33%	70,000.00	680,000.00
							TOTAL COST		2,140,000.00	3,007,500.00

*Price includes appertunances (manholes, valves, casings, etc.)

(Reimbursable amounts for water & sewer are calculated from itemized estimates for individual items, labor & contingency)

Henry County Water Authority

Engineering Department

100 Westridge Industrial Boulevard

McDonough GA 30253

770-914-3688 Fax 770-914-3359

PROJECT NAME: Rock Quarry Road
PROJECT #:
LOCATION: from Eagles Landing Pkwy to SR 138

DATE QUOTED: 2/12/2018
QUOTED BY: B. Harris

PRELIMINARY ESTIMATE OF PROBABLE COST

SEWER MATERIALS:

Item No.	Description	Price	Unit	Qty.	Total
PIPE-DISJ-08	08" DI PIPE,PC 350	$16.66	LF	269	$4,481.54
PIPE-DISJ-24	24" DI PIPE, PC 250	$73.34	LF	25	$1,833.50
SEWER MH-R&C-BD	manhole ring and cover bolt down	$278.00	EACH	0	$0.00
	4" DIA MANHOLE	$68.00	VF	89	$6,052.00
	4" DIA BASE SLAB	$82.00	EACH	7	$574.00
	8" BOOTS	$61.00	EACH	12	$732.00
	24" BOOTS	$240.00	EACH	3	$720.00
	8"-4' DIA PRECAST INVERT	$165.00	EACH	12	$1,980.00
	OC SUPPLIED HATCH CASTIN-IN FEE	$150.00	EACH	7	$1,050.00
			MATERIAL COST		$17,423.04

SEWER LABOR:

Item No.	Description	Price	Unit	Qty.	Total
010-01	Permanent / Temporary Grassing w/ Fertilizer & S	$1,000.00	ACRES	0.50	$500.00
010-04	Temporary Silt Fencing Type C*	$2.00	LF	30	$60.00
010-06	Silt Fence Removal Type C*	$0.80	LF	30	$24.00
015-02	Clearing for sewer lines, flood plain areas	$4,500.00	ACRES	0.30	$1,350.00
015-07	Construction Exits (20' x 50')*	$630.00	EA	2	$1,260.00
050-01	Standard 4' Diameter Manhole-*per vertical foot*	$75.00	VF	269	$20,175.00
050-05	Manhole Install over Existing Line "Doghouse"	$1,650.00	EACH	4	$6,600.00
050-06	Core Existing Manhole, 0-12" Diameter Hole	$650.00	EACH	8	$5,200.00
050-09	Invert Construction-Solid Concrete	$100.00	EACH	2	$200.00
	08" & 10" 0.0' - 10.0'	$18.00	LF	3	$54.00
	24" 12.1' - 14.0'	$32.00	LF	12	$384.00
			LABOR COST		$35,807.00
			TOTAL		$53,230.04
			25% Contingency Fee		$13,307.51
			Grand Total		$66,537.55

The cost information shown represents a reasonable professional opinion of probable cost based upon HCWA experience. HCWA makes no warranty, express or implied, that the cost of the work will not vary from the opinion of probable cost.

Henry County Water Authority

Engineering Department
100 Westridge Industrial Boulevard
McDonough GA 30253
770-914-3688 Fax 770-914-3359

PROJECT NAME: Rock Quarry Road
PROJECT #:
LOCATION: from Eagles Landing Pkwy to SR 138

DATE QUOTED: 2/12/2018
QUOTED BY: B. Harris

PRELIMINARY ESTIMATE OF PROBABLE COST

WATER MATERIALS:

Item No.	Description	Price	Unit	Qty.	Total
BFP-08	8" WATTS 757 OSANDY DOUBLE CHECK BACKFLOW	$3,425.00	EACH	6	$20,550.00
CAP-08	08" MJ SOLID CAP	$82.52	EACH	11	$907.72
CHK-DUAL-01	01" DUAL CHECK	$63.24	EACH	11	$695.64
CPLG-ANC-06X18	06" X 18" ANCHOR COUPLING	$121.61	EACH	11	$1,337.71
F.HYD-05	05' FIRE HYDRANT	$1,497.01	EACH	4	$5,988.04
MEGALUG-06	06"DI MEGALUG RESTRAINER	$19.54	EACH	4	$78.16
MEGALUG-08	08" DI MEGALUG RESTRAINER	$28.71	EACH	16	$459.36
PIPE-DISJ-08	08" DI PIPE,PC 350	$16.66	LF	626	$10,429.16
SAD-08X01	08" X 01" SERVICE SADDLE FOR DIP, DBL STRAP	$25.78	EACH	8	$206.24
THREADED ROD 3/4	all thread rod 3/4" x 10'	$1.35	EACH	0	$0.00
TUBING-01X100	01" X 100' COPPER TUBING	$258.31	EACH	2	$516.62
VALVE MARKER POST	concrete valve marker post	$11.50	EACH	11	$126.50
VALVE PADS	concrete valve pads	$10.60	EACH	15	$159.00
VALVE-GATE-08	08" MJ GATE VALVE	$683.55	EACH	8	$5,468.40
VAULT 10'X6'X6'	10'X6'X6' METER VAULT W/ 3'X2' DOGHOUSE 11'X7'X	$4,908.00	EACH	9	$44,172.00
VAULT 13'X8'X6'	13'X8'X6' METER VAULT W/ 3'X2' DOGHOUSE 14'X9'X	$6,607.00	EACH	6	$39,642.00
VAULT 16'X8'X6'	16'X8'X6' METER VAULT W/ 3'X2' DOGHOUSE 17'X8'X	$7,473.00	EACH	1	$7,473.00
Z-CORP STOP-01	BRASS CORP STOP, 01" PACK JOINT COMPRESSIOI	$48.70	EACH	6	$292.20
Z-CURB STOP-01 MN	brass curb stop 1" w/ meter nut	$52.80	EACH	6	$316.80

MATERIAL COST $138,818.55

WATER LABOR:

Item No.	Description	Price	Unit	Qty.	Total
010-01	Permanent / Temporary Grassing w/ Fertilizer & Straw*	$1,000.00	ACRES	0.2	$200.00
010-04	Temporary Silt Fencing Type C*	$2.00	LF	12	$24.00
010-06	Silt Fence Removal Type C*	$0.80	LF	12	$9.60
015-02	Sod Replacement*	$1.00	SF	7,600	$7,600.00
040-04	8-inch Class 350 D.I.P.,	$18.00	LF	6	$108.00
060-04	8" Gate valve and box, including	$125.00	EACH	11	$1,375.00
070-01	Fire Hydrant assembly, including - hydrant, main line tee,	$600.00	EACH	4	$2,400.00
080-13	Cut & Plug Existing Main, 8"	$1,250.00	EACH	9	$11,250.00
090-02	EXISTING Meter Removal, Reconnection, and/or Reloca	$100.00	EACH	16	$1,600.00
090-08	Curb Stop Box Installation	$100.00	EACH	0	$0.00
101-04	Installation/Relocation of Pre-Assembled Meter and Vaul	$2,000.00	EACH	10	$20,000.00
102-04	Installation/Relocation of BFP and Vault, Complete, 8"	$2,000.00	EACH	6	$12,000.00
110-01	Abandon Valve in Place, Complete	$50.00	EACH	11	$550.00
110-02	Abandon Service Connection	$50.00	EACH	16	$800.00
110-03	Salvage/Remove Existing Fire Hydrant Assembly	$250.00	EACH	4	$1,000.00
111-02	Punch Out List (meter/valve box adjustments, etc.)	$250.00	HR	40	$10,000.00
111-03	Exploratory Digging for HCWA Facilities (to be used whe	$275.00	HR	8	$2,200.00
120-01	Items not specifically addressed in this bid form may be added at the direction of the Authority.				

LABOR COST $71,116.60

TOTAL $209,935.15
25% Contingency Fee $52,483.79
Grand Total $262,418.94

The cost information shown represents a reasonable professional opinion of probable cost based upon HCWA experience.
HCWA makes no warranty, express or implied, that the cost of the work will not vary from the opinion of probable cost.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: **PI #0015090, Henry County** **OFFICE: State Utilities Office**

FROM: Jill Franks for: **Patrick Allen, State Utilities Administrator** **DATE: June 23, 2017**

TO: Albert Shelby, State Program Delivery Administrator
Attn: Jason Mobley, Project Manager

SUBJECT: **PRELIMINARY RAILROAD COST FOR SURFACE WORK (CONCEPT ESTIMATE)**

A review of railroads located within the project limits on the above referenced project has been conducted based on the proposed concept layout provided. Listed below is a breakdown of the estimated railroad costs:

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
Norfolk Southern Railway Company		
– P.E. cost for bridge over railroad	**$0.00**	**$ 15,000.00-20% LOCAL**
– Const. inspection cost for bridge over railroad	**$0.00**	**$ 25,000.00-100% LOCAL**
Total Reimbursement Cost:	**$0.00**	**$ 40,000.00**

Total railroad surface work reimbursable cost for the above project is estimated to be:

$40,000.00

Please note that this amount does not include other reimbursable utility costs that may be associated with this project. This PE funds are 20% LOCALLY funded and CONSTR funds are 100% LOCAL.

If you have any questions, please contact Jill Franks, (404) 631-1370, jfranks@dot.ga.gov or Marcela Coll, (404)631-1372 mcoll@dot.ga.gov.

PA:jlf

cc: Yulonda Pride-Foster, Utilities Preconstruction Manager
Angela Robinson, State Financial Management Administrator
Scott Parker, District 3 Utilities Manager
Michael Nash, Utilities Railroad Crossing Manager

CROY ENGINEERING Engineers Planners Surveyors

Memo

To: Andrew Romain

CC: Chris Rideout

From: Michelle McIntosh

Date: September 26, 2017

Re: Rock Quarry Road Widening, Henry County, P.I. #0015090

Approximately 400 linear feet of impacts to 3 perennial streams are anticipated at this time.

Based on the current Standard Operation Procedures (SOPs) for determining the required amount of stream mitigation credits, it is anticipated that 2,277 stream mitigation credits would be required. Based on the sum of factors under current SOPs, this project requires an average 5.58 stream mitigation credits per linear foot of impact. The current cost for stream credits inside the primary service area, at the closest mitigation bank to the impact site, is $38 per credit. As such, the current mitigation estimate is as follows:

2,277 credits at $38 each = $86,527, rounded say **$90,000**

The SOPs are scheduled to change on December 15, 2017. Currently, most projects average about 3.5 credits per linear foot of impact and it is anticipated that they would average about 9 credits per linear foot of impact after the SOPs change (approximately 2.58 times the current SOP). As such, the current mitigation estimate for after December 15, 2017 is as follows:

2,277 credits X 2.58 = 5,875 credits
5,875 X $38* = $223,364 total anticipated cost, rounded say **$225,000**

*This factor fluctuates with time.

Rock Quarry Road 3-Year Crash Data

By Type per Intersection

Route	Intersecting Route	Angle	Head On	Not A Collison with Motor Vehicle	Rear End	Sideswipe-Oppostite Direction	Sideswipe-Same Direction	Totals
Rock Quarry Rd	N Henry Blvd/SR 42/SR 138	21	2	5	42	0	3	73
Rock Quarry Rd	Spring St	4	0	0	4	0	1	9
Rock Quarry Rd	Nova Cir	1	0	1	0	0	0	2
Rock Quarry Rd	S Lee St	0	0	0	1	0	0	1
Rock Quarry Rd	Railroad St	0	0	7	2	0	0	9
Rock Quarry Rd	Reeves Pkwy	0	0	5	1	1	0	7
Rock Quarry Rd	Stonegate Apts	0	0	0	1	0	0	1
Rock Quarry Rd	Red Oak Rd	4	0	9	22	0	1	36
Rock Quarry Rd	Banks Road/Carrington Ridge	19	1	8	26	2	2	58
Rock Quarry Rd	Bristol Green	1	0	2	2	1	0	6
Rock Quarry Rd	Garden Walk	3	0	8	8	0	0	19
Rock Quarry Rd	Landing Pointe	2	0	1	6	0	0	9
Rock Quarry Rd	Windsong Dr	1	1	4	18	0	1	25
Rock Quarry Rd	N Park Trl/Eagles Walk	6	0	3	29	0	3	41
Rock Quarry Rd	Hospital Dr	11	0	1	28	0	7	47
Rock Quarry Rd	Killearn Blvd	0	0	1	3	0	0	4
Rock Quarry Rd	N Park Dr/Eagles Springs Dr	10	0	0	14	1	2	27
	Totals	**83**	**4**	**55**	**207**	**5**	**20**	**374**

By Type per Year

Route	Year	Angle	Head On	Not A Collison with Motor Vehicle	Rear End	Sideswipe-Oppostite Direction	Sideswipe-Same Direction	Totals
Rock Quarry Rd	9/2013-8/2014	30	1	18	70	2	10	131
Rock Quarry Rd	9/2014-8/2015	25	3	20	70	0	7	125
Rock Quarry Rd	9/2015-8/2016	28	0	17	67	3	3	118
	Totals	**83**	**4**	**55**	**207**	**5**	**20**	**374**

	Property Damage Only Accidents	Injury Accidents	Fatal Accidents	Total Accidents		Total Number of Injuries	Total Number of Fatalities
9/2013-8/2014	90	40	1	131		56	2
9/2014-8/2015	90	35	0	125		52	0
9/2015-9/2016	82	35	1	118		63	1
Total	**262**	**110**	**2**	**374**		**171**	**3**

Crash Rates - 3 Year Average

2016 ADT (GEOCounts)	20,200
N (crash period)	3
Length of road	2.43
Roadway Classification	Urban Minor Arterial - Non-NHS

	All Accidents	Total Non-fatal Injury Accidents	Total Injuries	Total Fatal Accidents	Total Fatalities
Statewide Avg Crash Rates	608	124	183	1.02	1.14
RQR Crash Rate	696	205	318	3.72	5.58
% Difference	14%	65%	74%	265%	390%
	1.1x	1.7x	1.7x	3.6x	4.9x

Department of Transportation
State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE Henry County
P.I. # 0015090

OFFICE Planning
DATE June 2, 2017

FROM Cynthia L. VanDyke, State Transportation Planning Administrator

TO Albert Shelby, State Program Delivery Engineer
Attention: Jason Mobley

SUBJECT **Reviewed** Design Traffic Forecasting Report for ROCK QUARRY ROAD FROM EAGLES LANDING PKWY TO SR 42/SR 138.

We have reviewed the Consultant's Traffic Forecasting Report for the above project. The Design Traffic Forecasting Report is approved based on the information furnished.

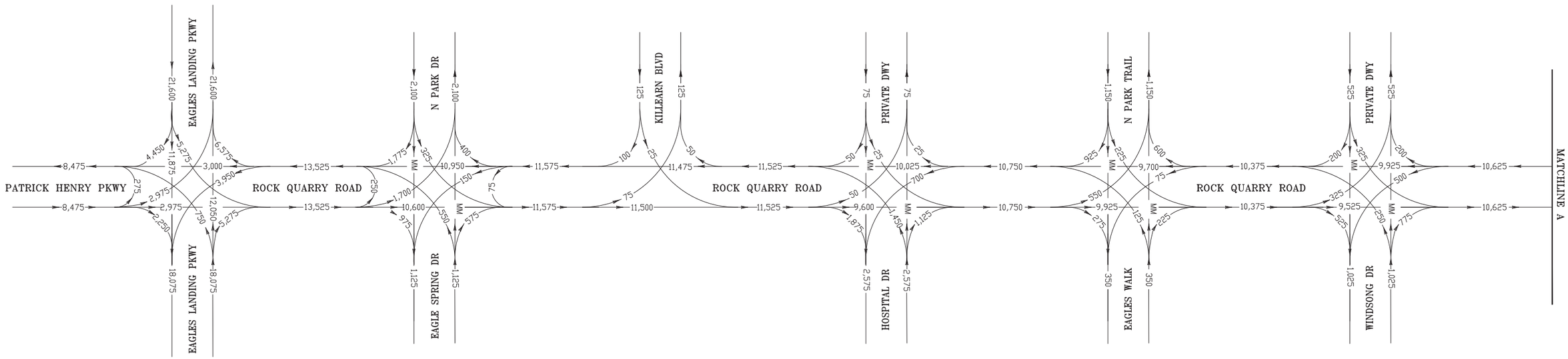
If you have any questions concerning this information, please contact Rhonda Niles at 404-631-1924.

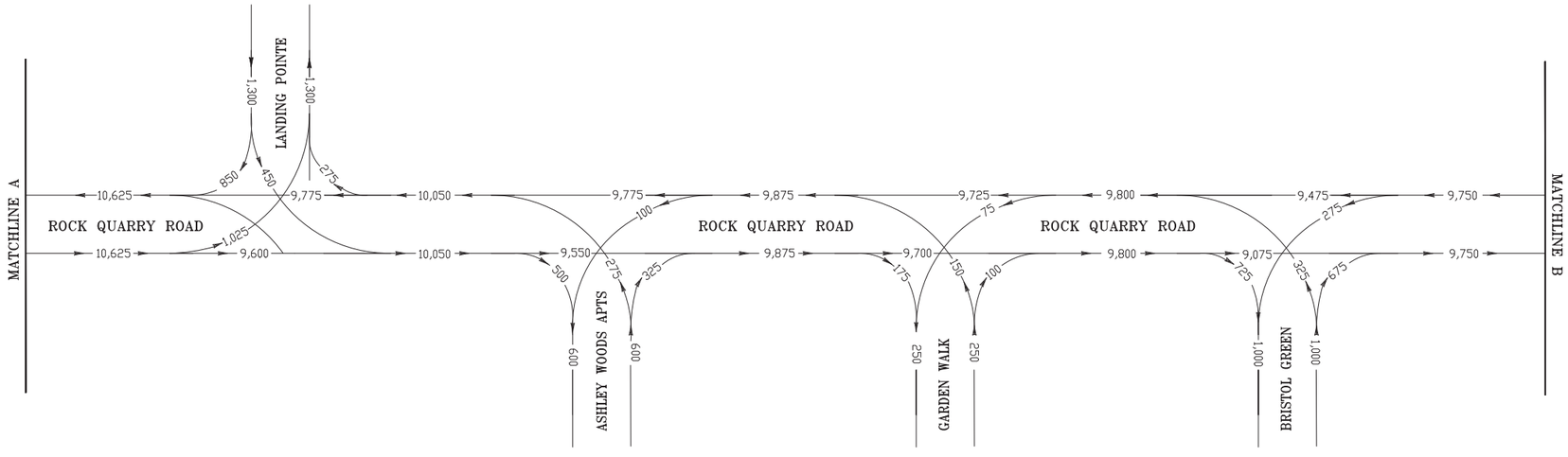
Mahesh Atluri
HNTB
Design Traffic Review Consultant to GDOT
404-946-5753

CLV/MA

DATE: 3/6/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	1	28

2016 EXISTING ADT





(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
Between Killearn Blvd & N Park Dr	5.00%	1.00%	6.00%
N Henry Boulevard/SR 42/SR 138/US 23			
West of Rock Quarry Rd	7.50%	2.50%	10.00%
East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

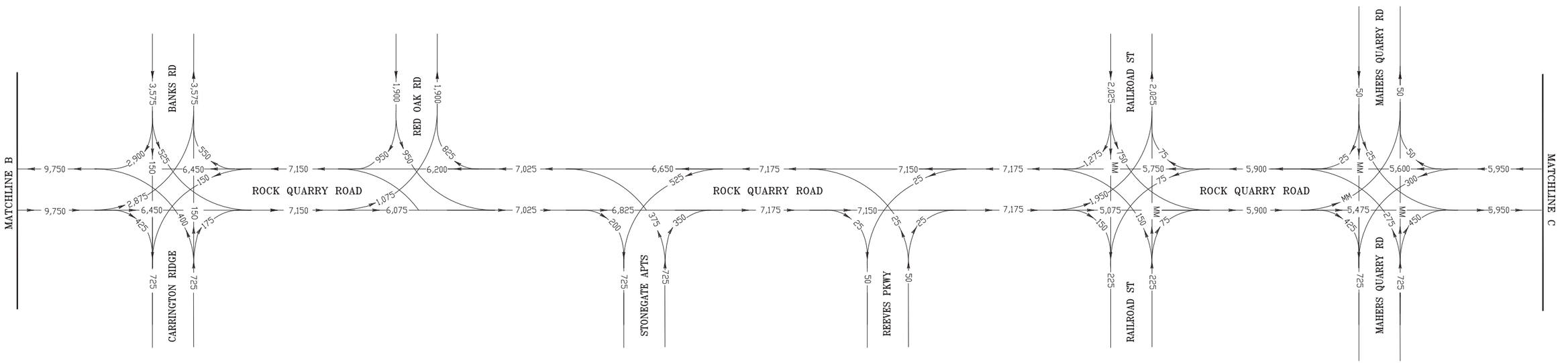
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

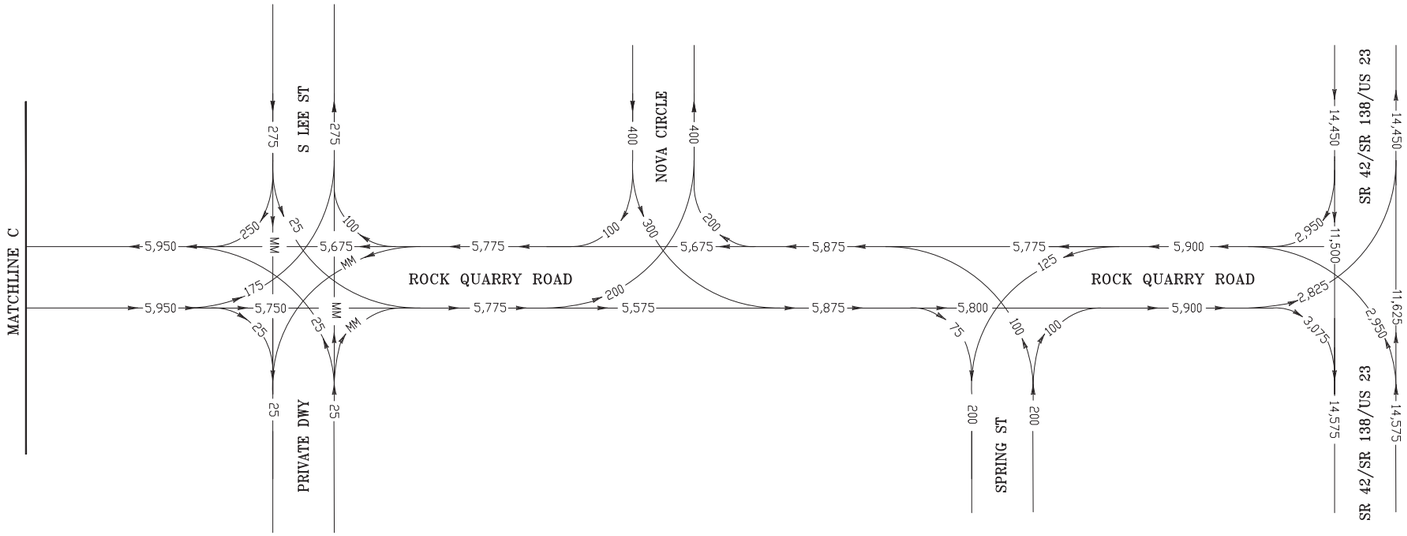
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
EXISTING ADT

DATE: 3/6/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	2	28

2016 EXISTING ADT





(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
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N Henry Boulevard/SR 42/SR 138/US 23			
West of Rock Quarry Rd	7.50%	2.50%	10.00%
East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

SCALE: NOT TO SCALE

Georgia Department of Transportation

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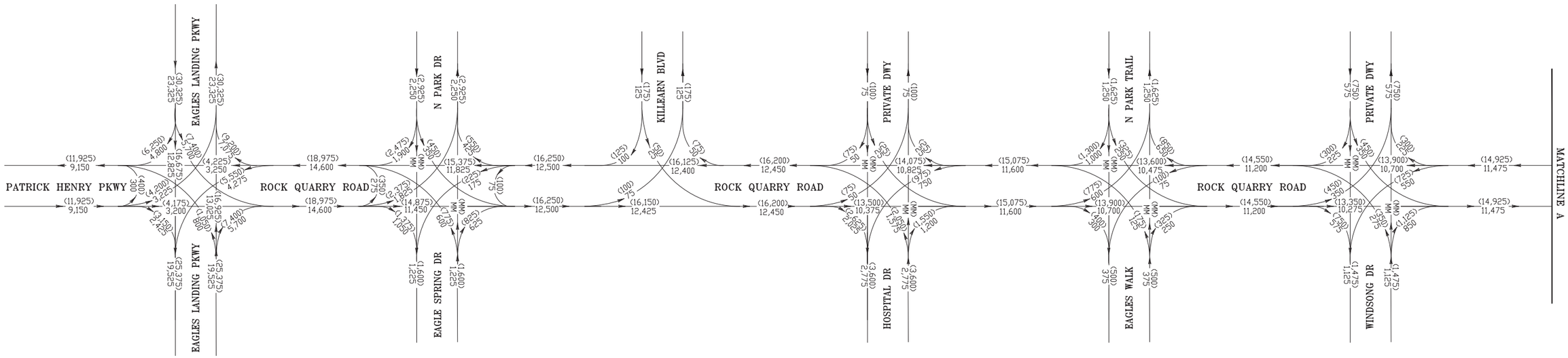
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
EXISTING ADT

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	3	28

2024/(2044) NO BUILD ADT



	24-HR % TRUCK		
(Sta #) Count Location	S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
Between Killearn Blvd & N Park Dr	5.00%	1.00%	6.00%
N Henry Boulevard/SR 42/SR 138/US 23			
West of Rock Quarry Rd	7.50%	2.50%	10.00%
East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2044 VOLUMES)
2024 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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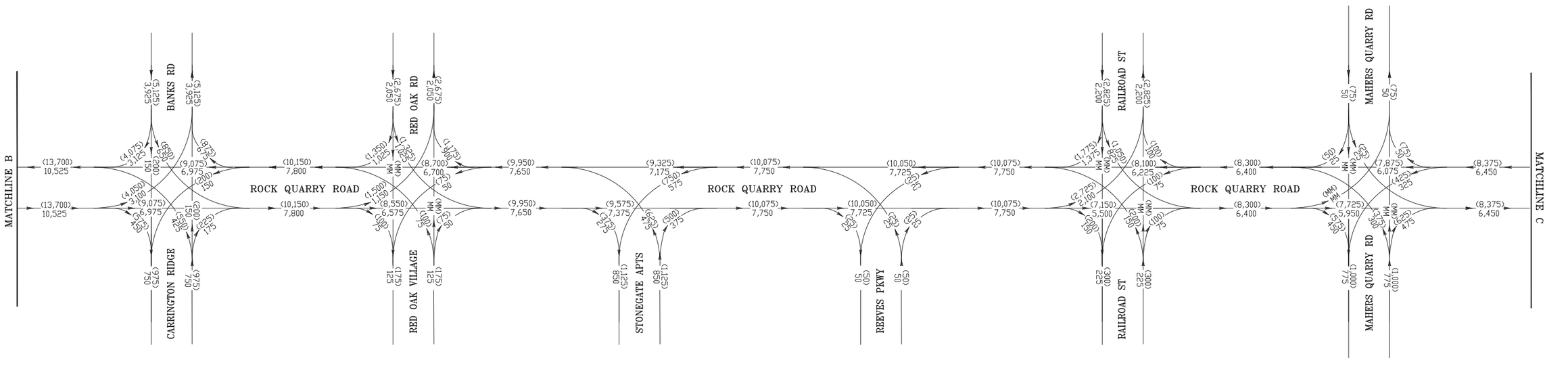
STATE OF GEORGIA
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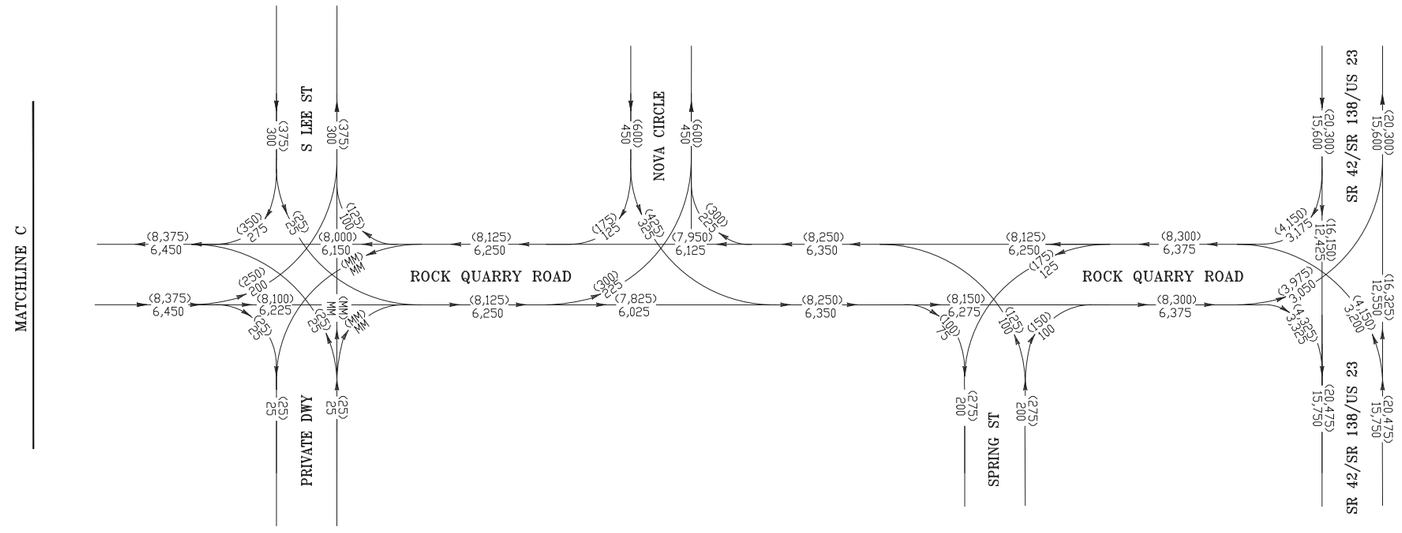
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD ADT

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	4	28

2024/2044 NO BUILD ADT





	24-HR % TRUCK		
(Sta #) Count Location	S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
Between Killearn Blvd & N Park Dr	5.00%	1.00%	6.00%
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East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2044 VOLUMES)
2024 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

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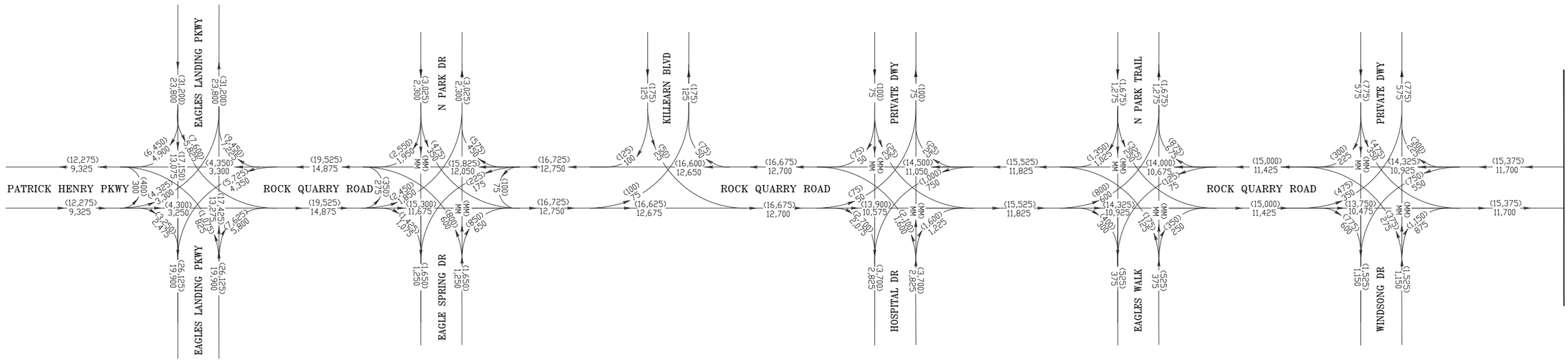
STATE OF GEORGIA
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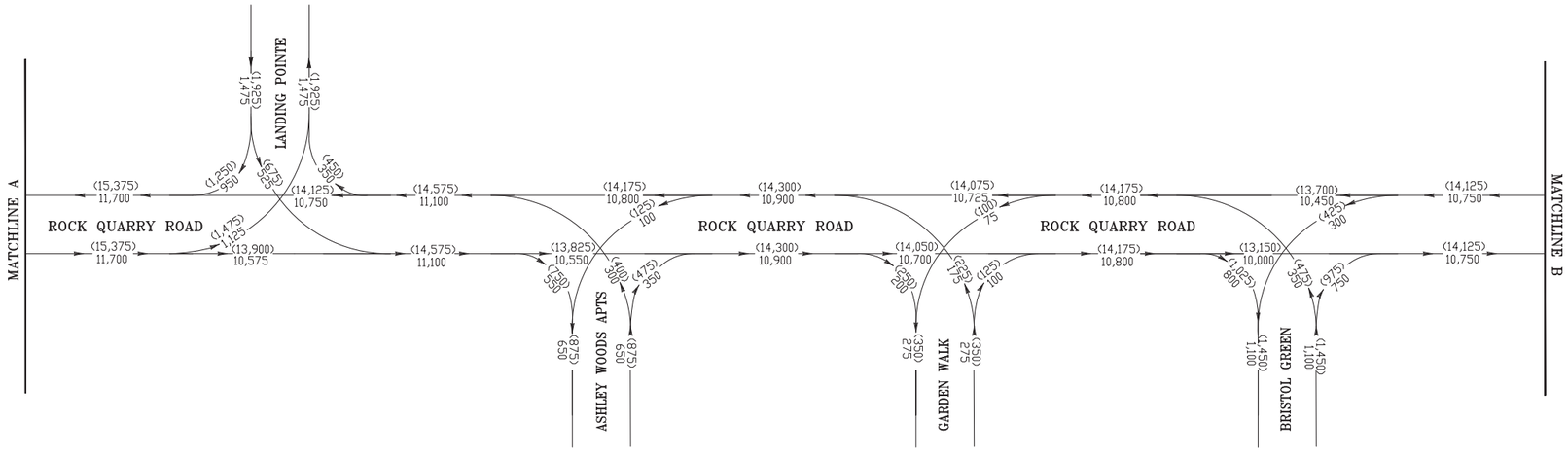
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HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD ADT

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	5	28

2026/2046 NO BUILD ADT





(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
Between Killearn Blvd & N Park Dr	5.00%	1.00%	6.00%
N Henry Boulevard/SR 42/SR 138/US 23			
West of Rock Quarry Rd	7.50%	2.50%	10.00%
East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2046 VOLUMES)
2026 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

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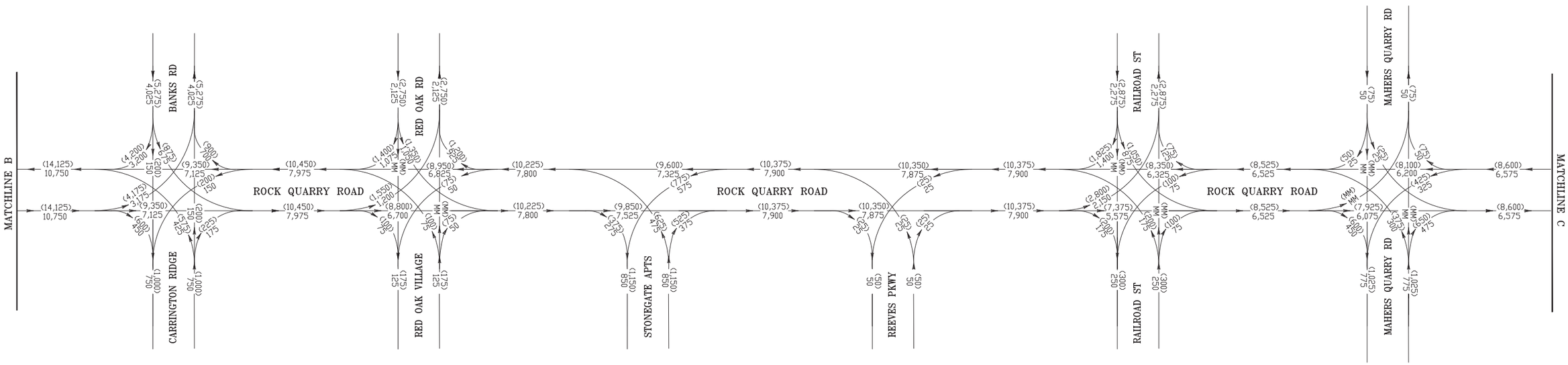
STATE OF GEORGIA
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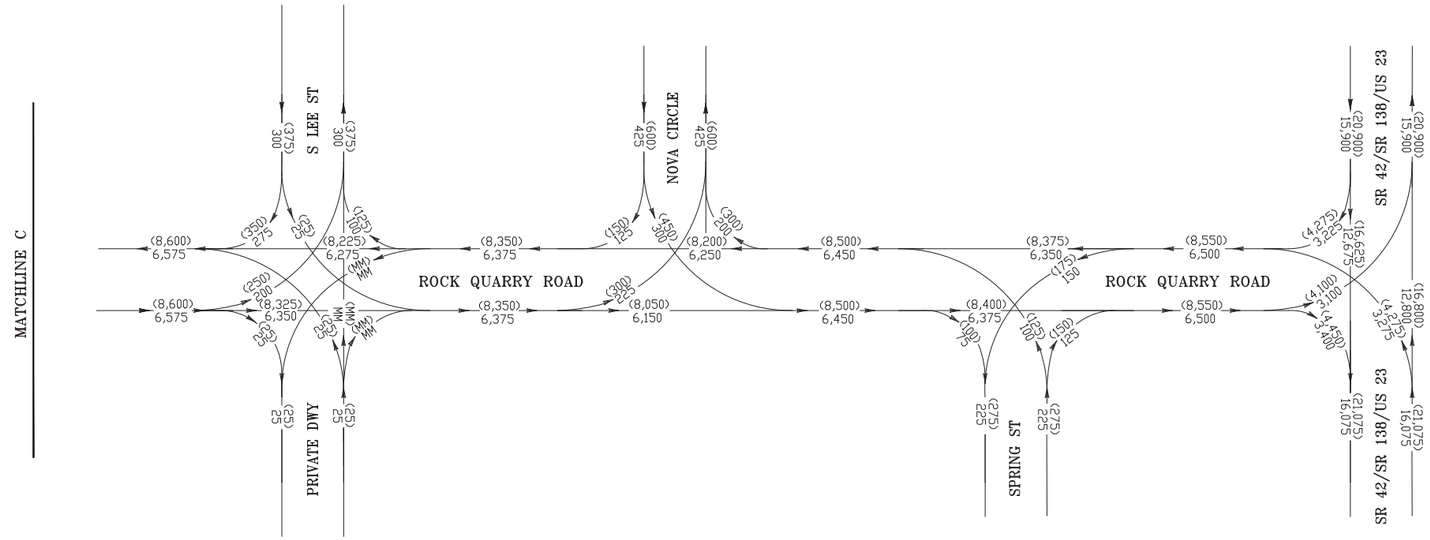
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HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD +2 ADT

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	6	28

2026/2046 NO BUILD ADT





(Sta #) Count Location Rock Quarry Road	24-HR % TRUCK S.U.	COMB.	TOTAL
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
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West of Rock Quarry Rd	7.50%	2.50%	10.00%
East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2046 VOLUMES)
2026 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

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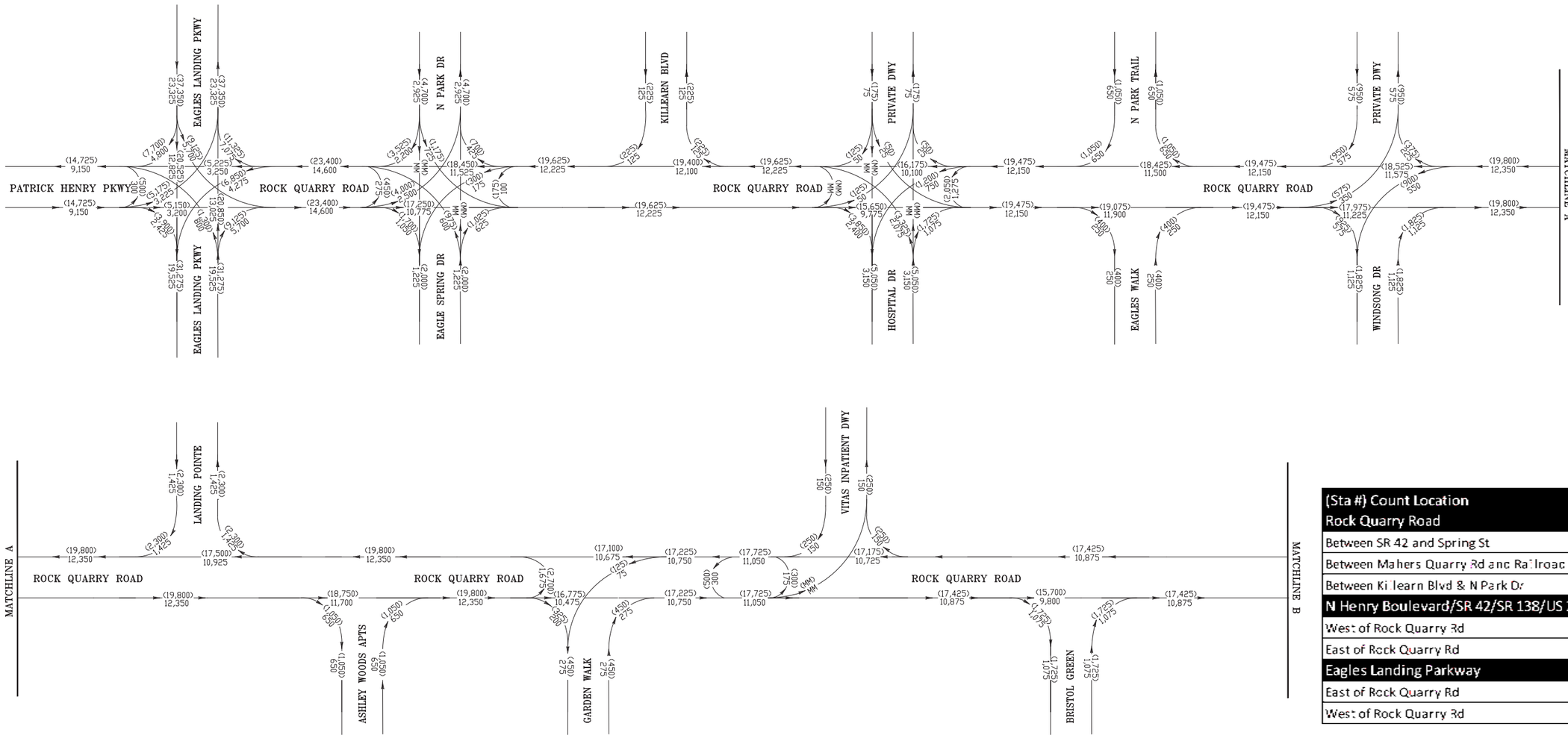
STATE OF GEORGIA
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PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD +2 ADT

DATE: 5/8/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	7	28

2024/2044 BUILD ADT



(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
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West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2044 VOLUMES)
2024 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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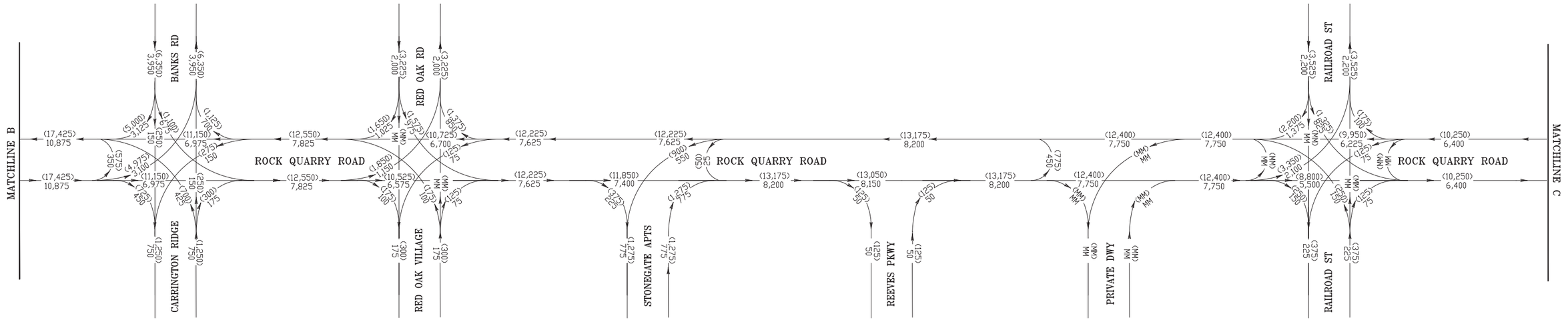
STATE OF GEORGIA
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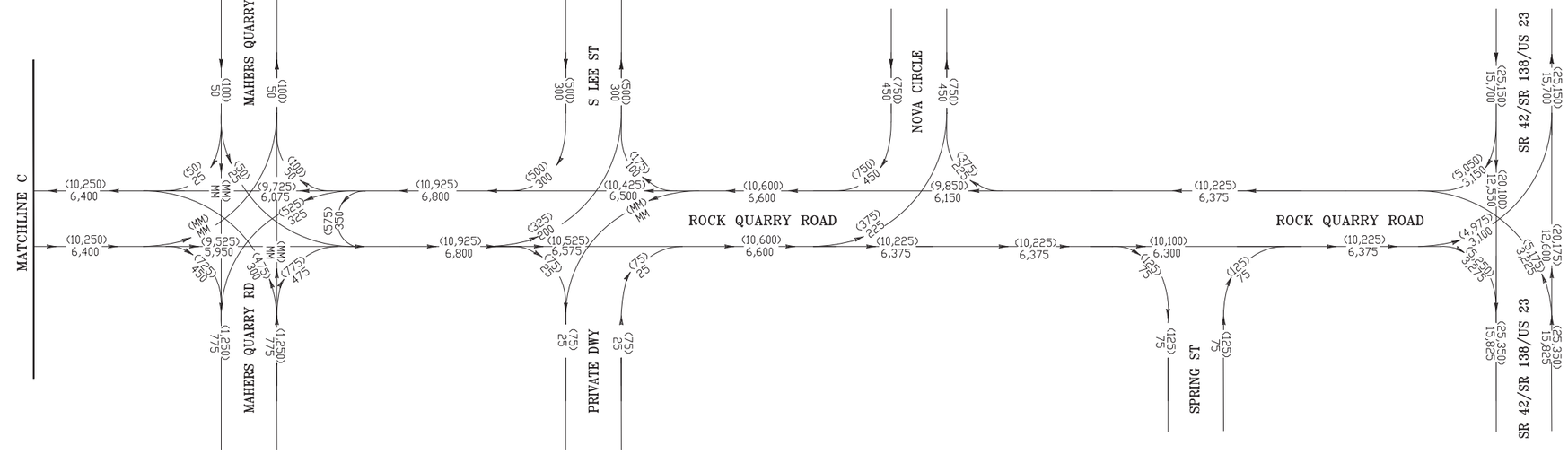
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HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD ADT

DATE: 5/8/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	8	28

2024/2044 BUILD ADT





(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
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West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2044 VOLUMES)
2024 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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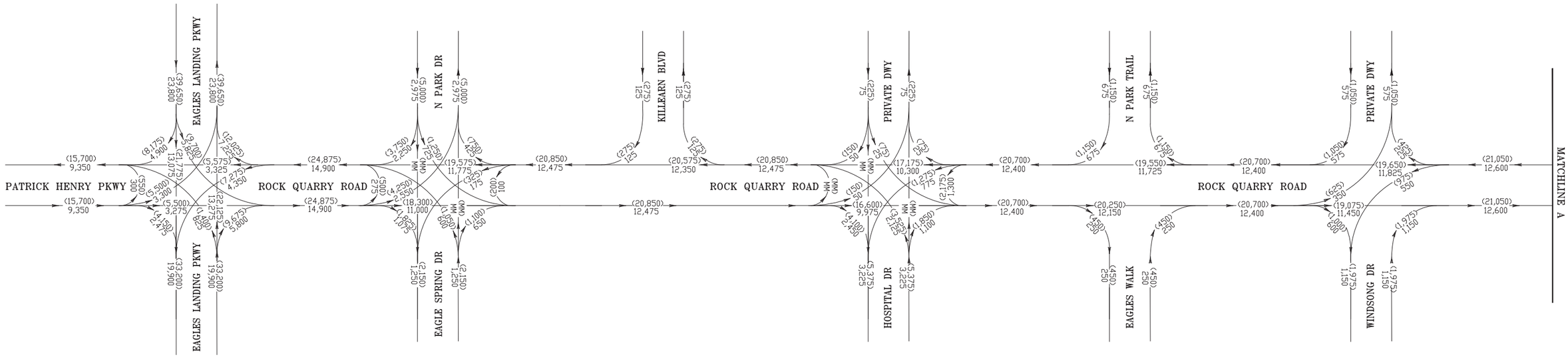
STATE OF GEORGIA
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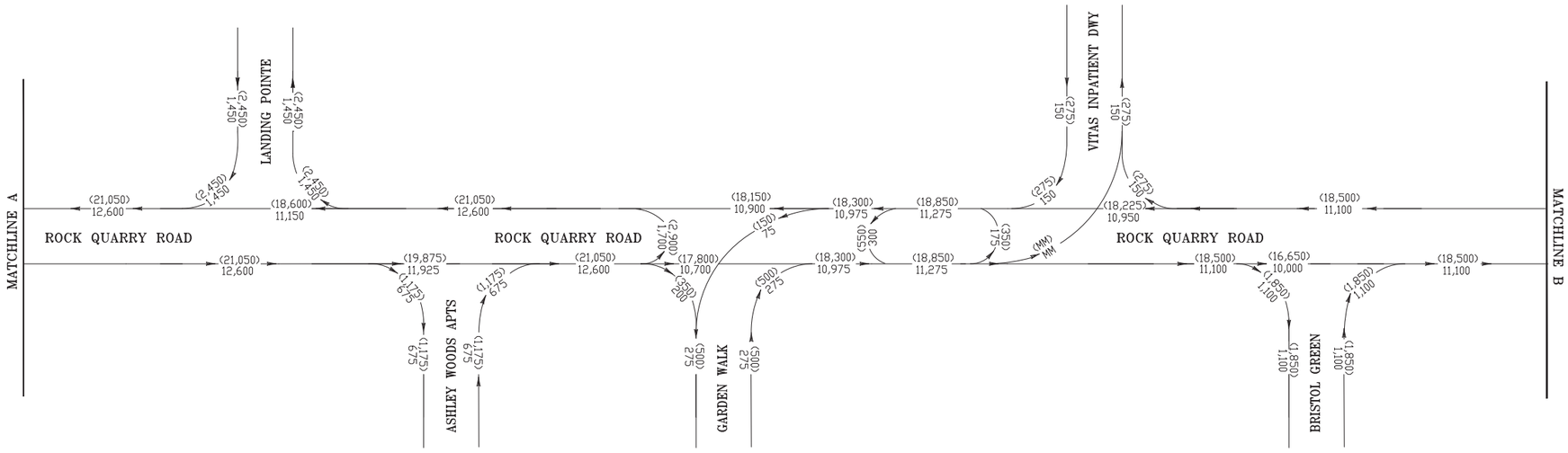
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD ADT

DATE: 5/18/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	9	28

2026/2046 BUILD ADT





(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
Between Killearn Blvd & N Park Dr	5.00%	1.00%	6.00%
N Henry Boulevard/SR 42/SR 138/US 23			
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East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2046 VOLUMES)
2026 VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

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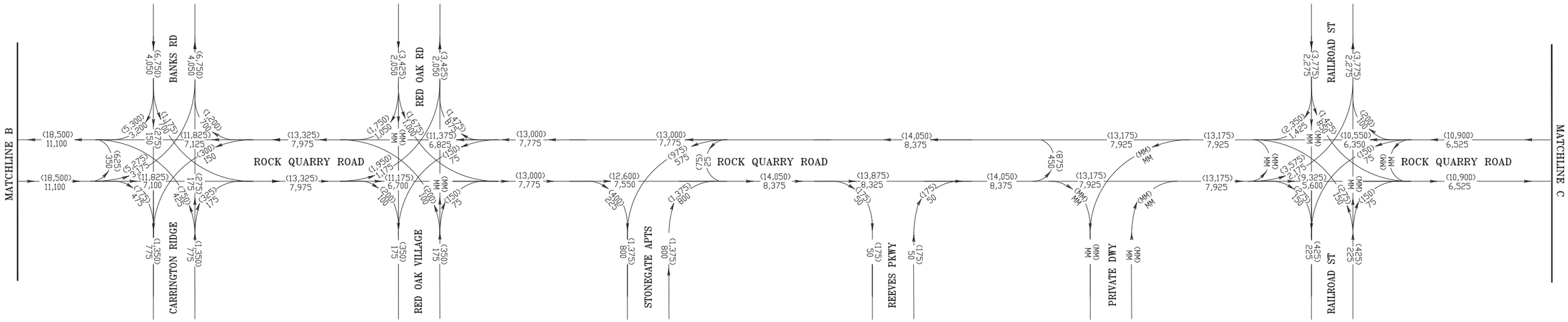
STATE OF GEORGIA
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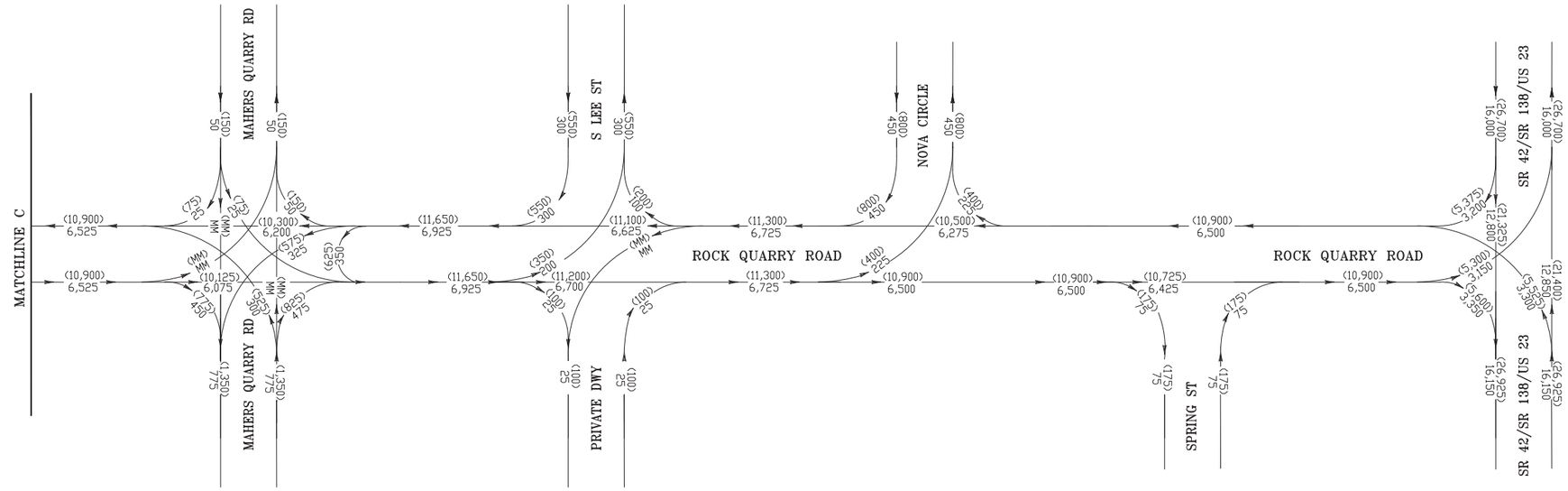
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD +2 ADT

DATE: 5/8/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	10	28

2026/2046 BUILD ADT





(Sta #) Count Location	24-HR % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road			
Between SR 42 and Spring St	7.50%	1.50%	9.00%
Between Mahers Quarry Rd and Railroad St	8.50%	1.00%	9.50%
Between Killearn Blvd & N Park Dr	5.00%	1.00%	6.00%
N Henry Boulevard/SR 42/SR 138/US 23			
West of Rock Quarry Rd	7.50%	2.50%	10.00%
East of Rock Quarry Rd	6.00%	2.00%	8.00%
Eagles Landing Parkway			
East of Rock Quarry Rd	8.50%	4.50%	13.00%
West of Rock Quarry Rd	6.00%	2.50%	8.50%

(2046 VOLUMES)
2026 VOLUMES

SCALE: NOT TO SCALE

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HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

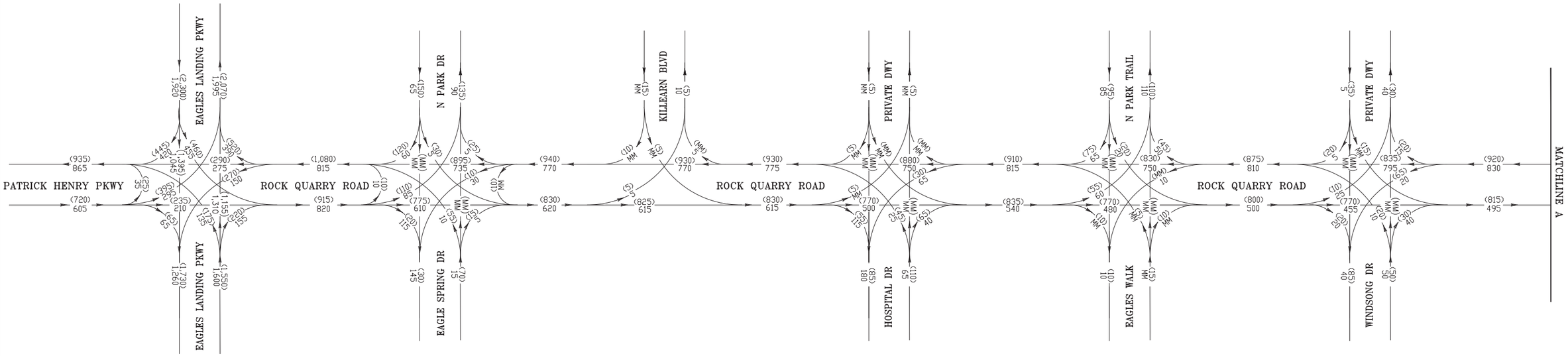
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DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

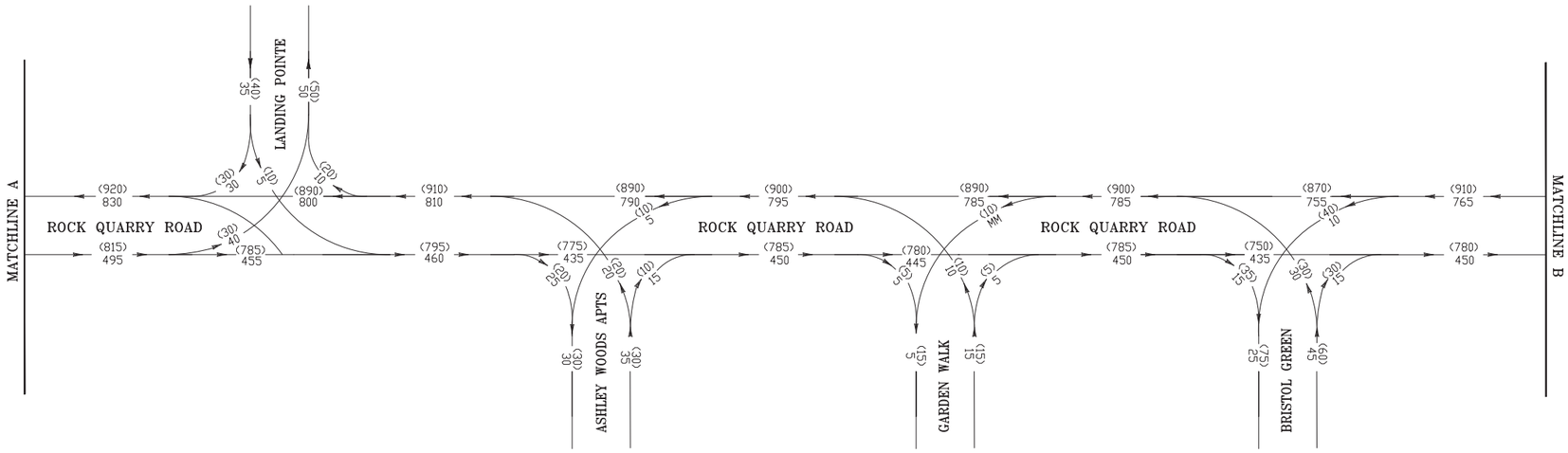
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD +2 ADT

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	11	28

2016 EXISTING PEAK HOUR





Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

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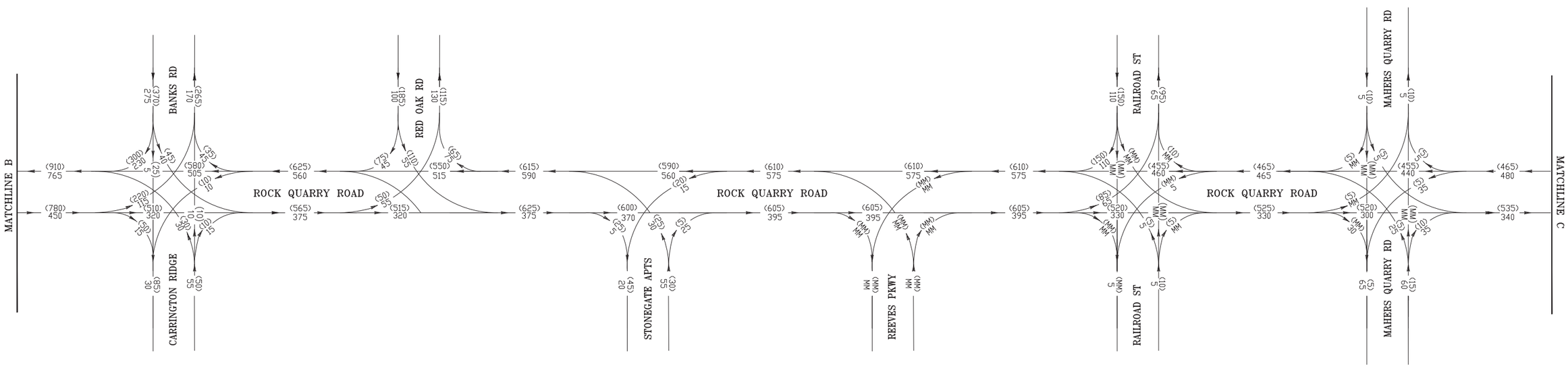
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DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

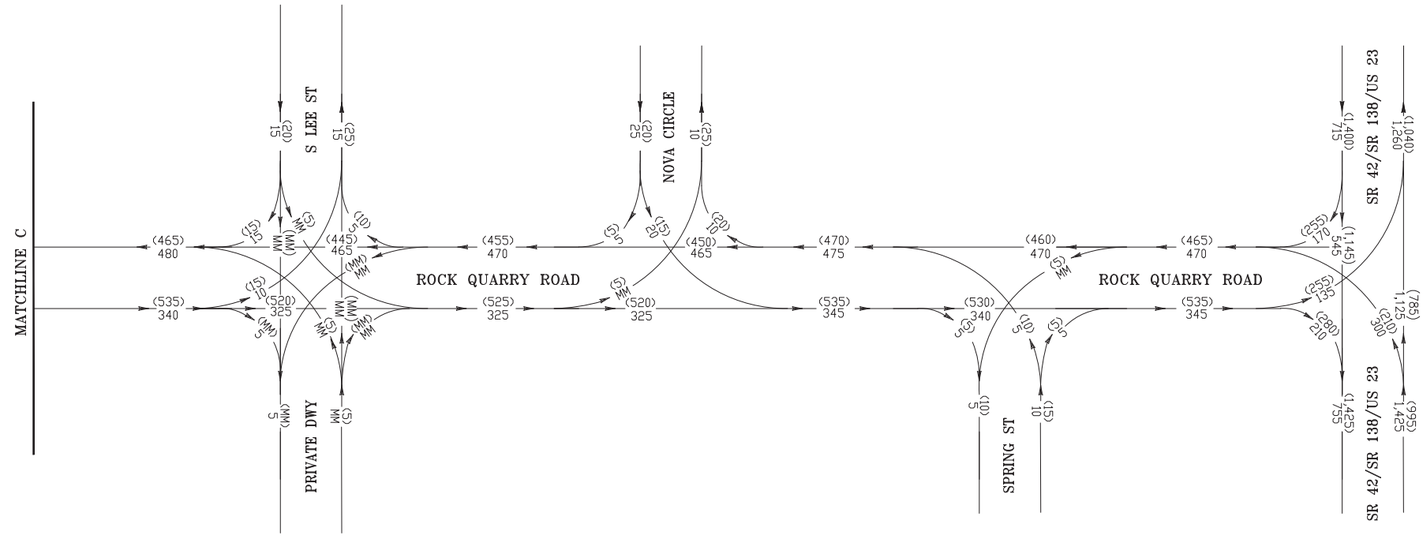
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
EXISTING PEAK HOUR

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	12	28

2016 EXISTING PEAK HOUR





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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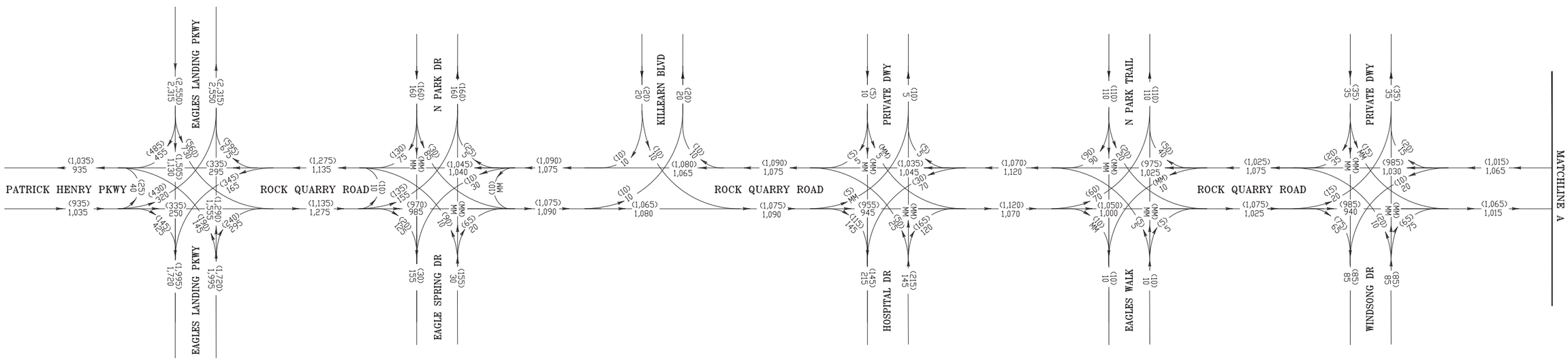
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DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

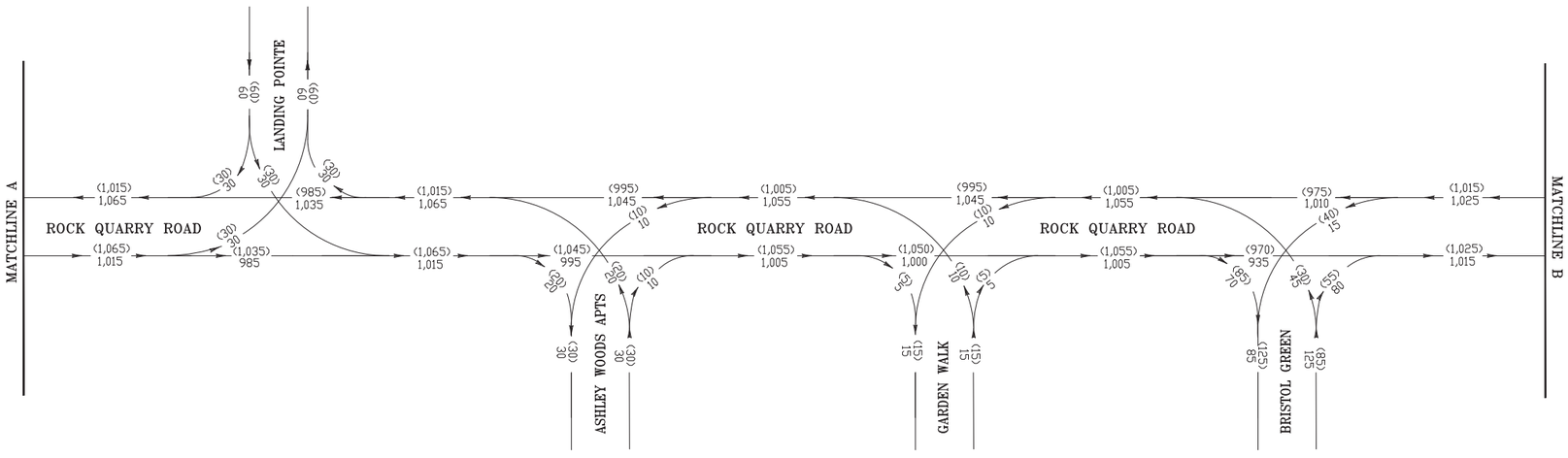
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
EXISTING PEAK HOUR

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	13	28

2024 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

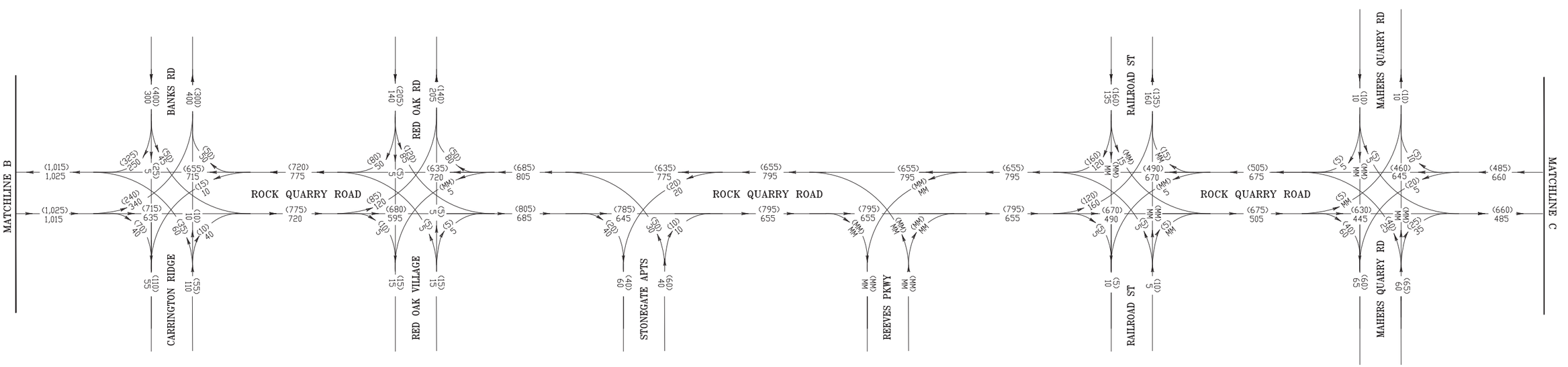
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

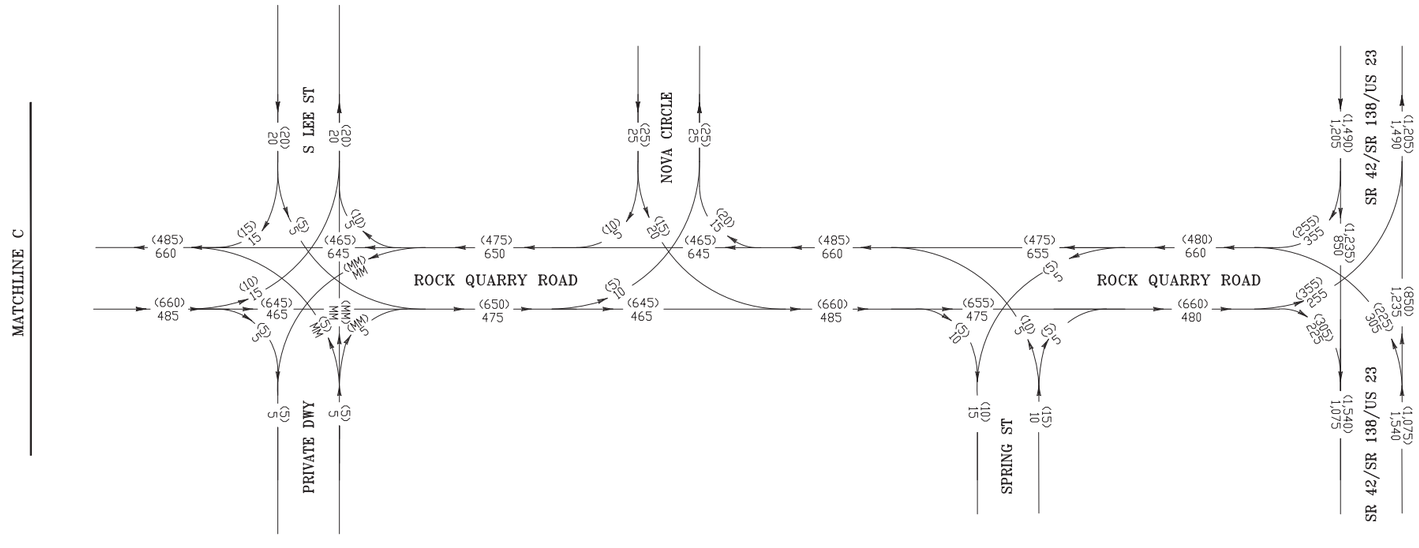
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	14	28

2024 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

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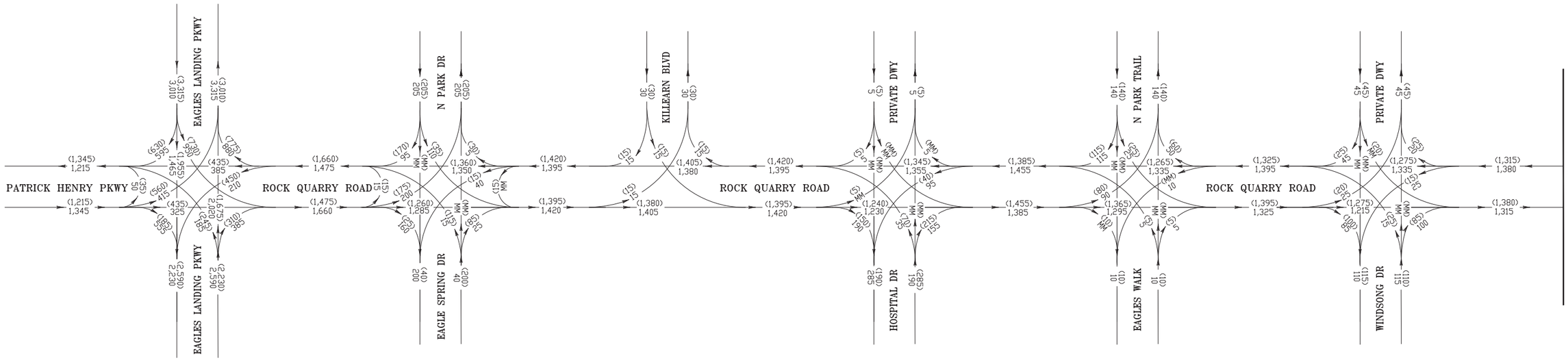
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

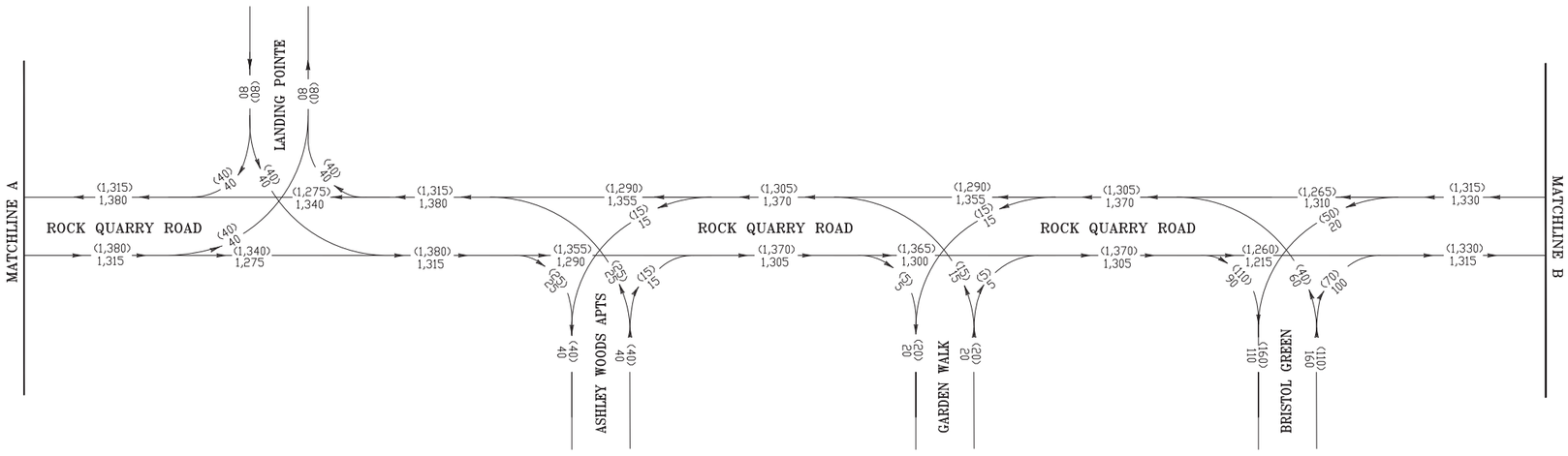
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	15	28

2044 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
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PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

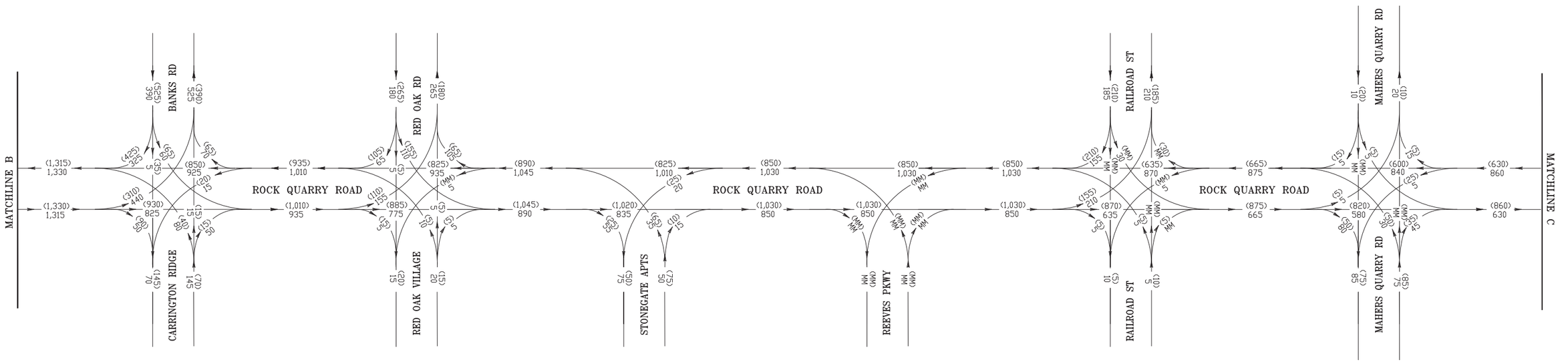
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

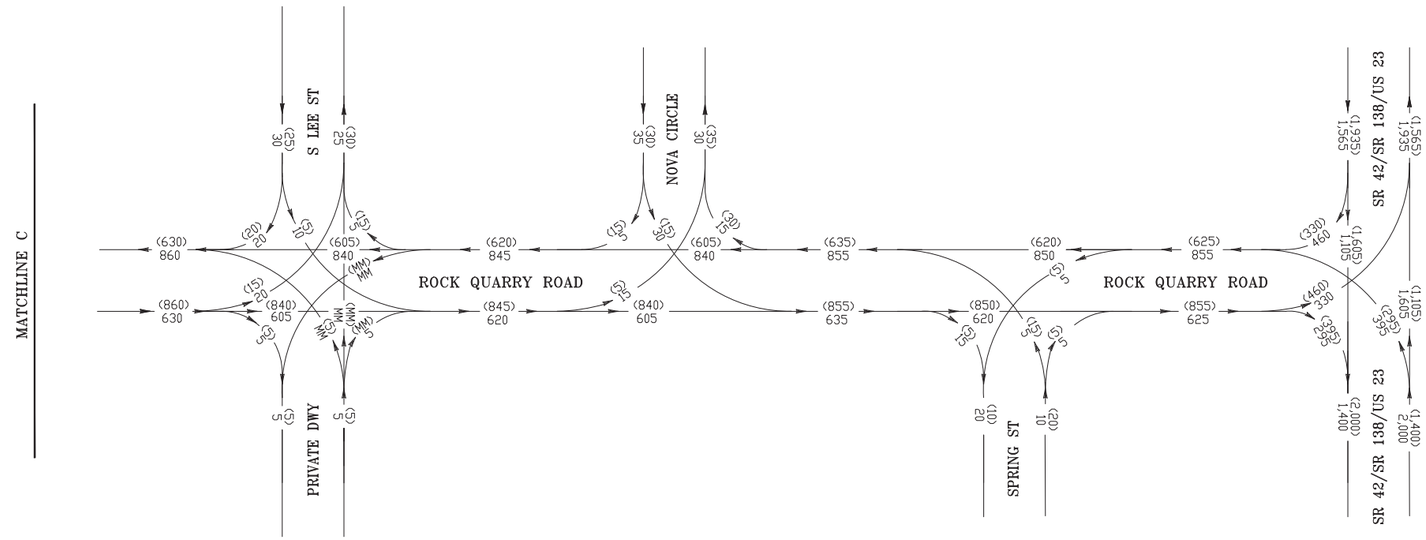
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	16	28

2044 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

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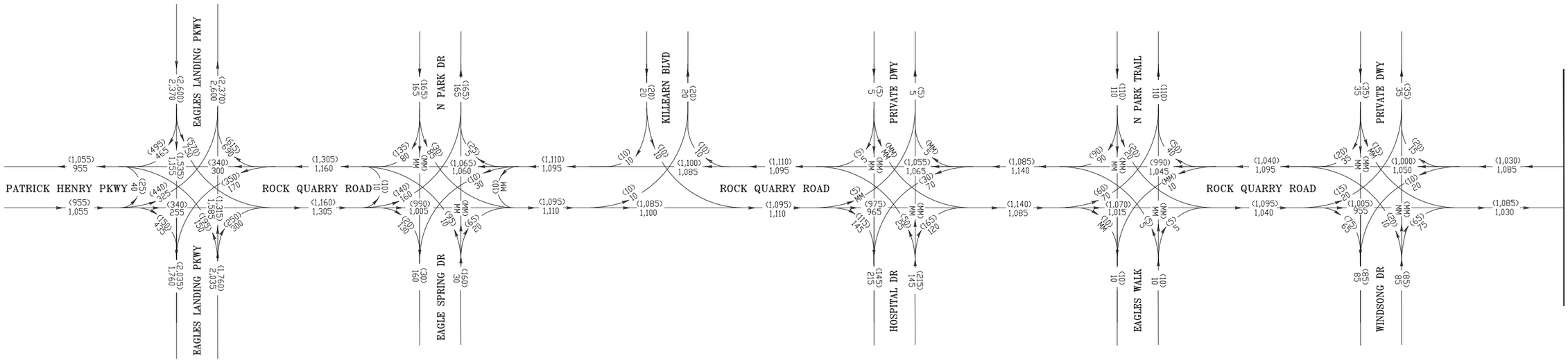
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

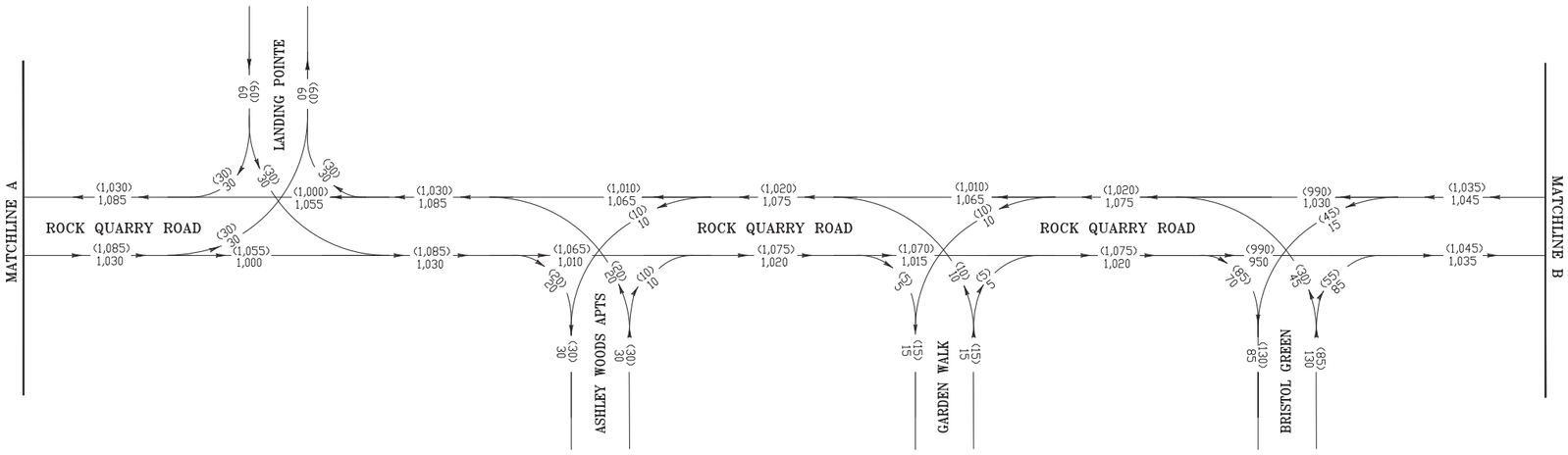
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD DHV

DATE: 6/2/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	17	28

2026 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

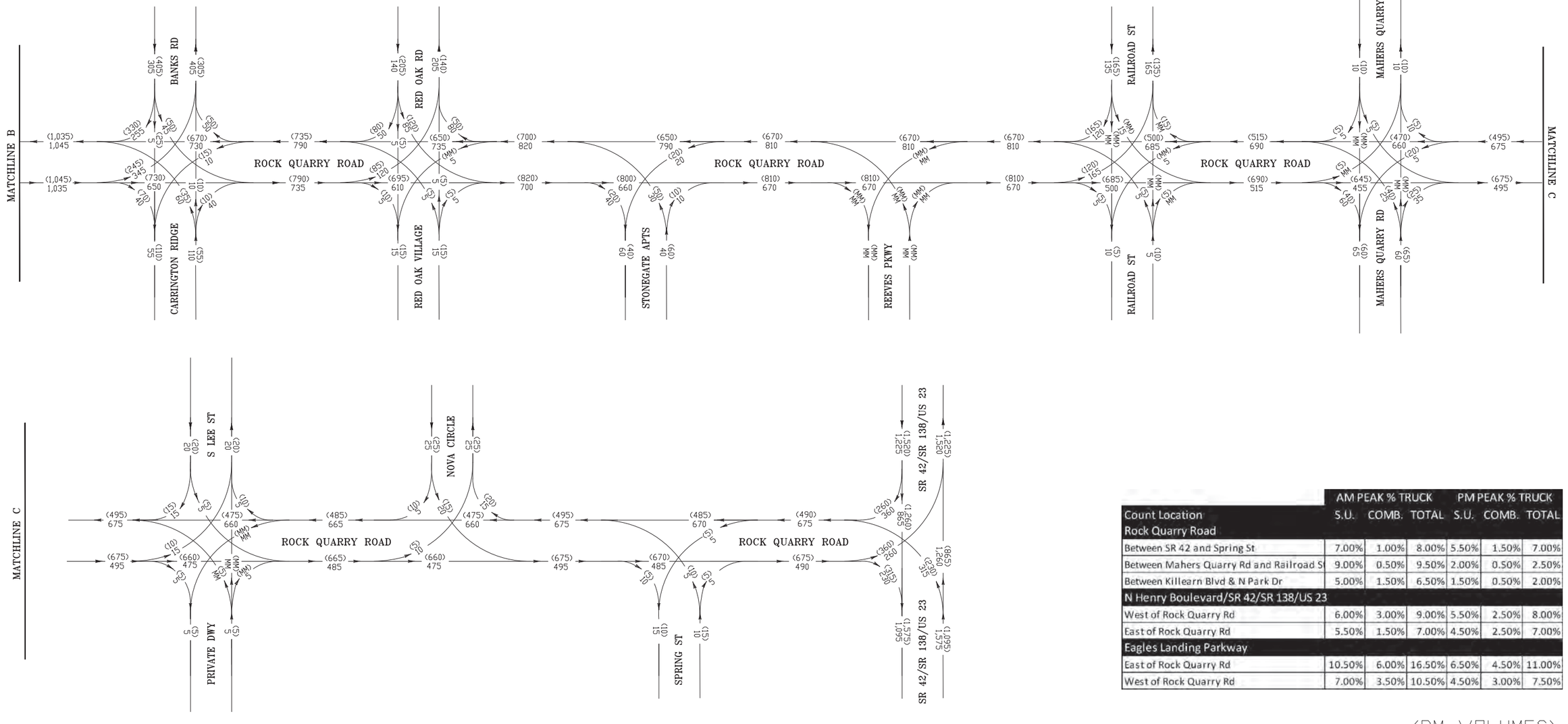
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD +2 DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	18	28

2026 NO BUILD DHV



Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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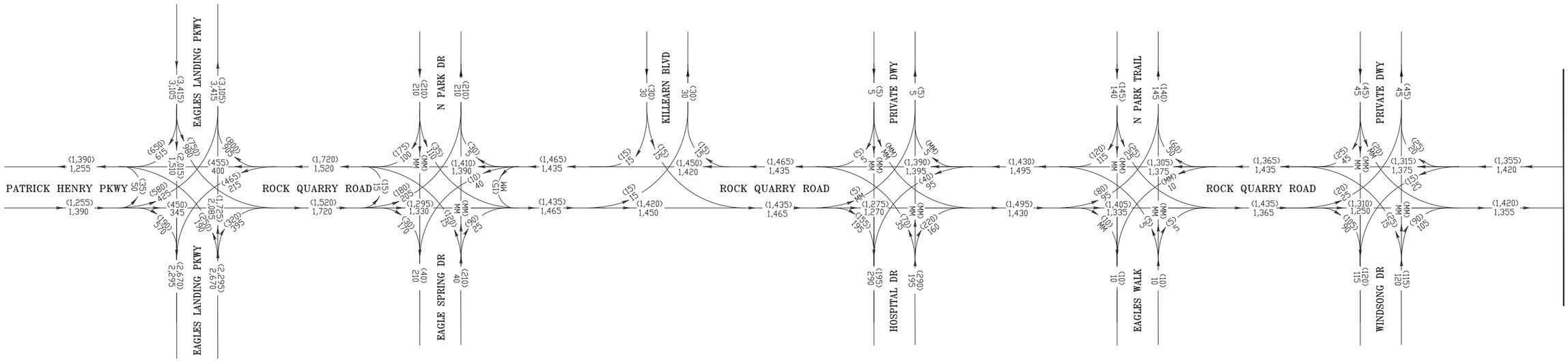
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

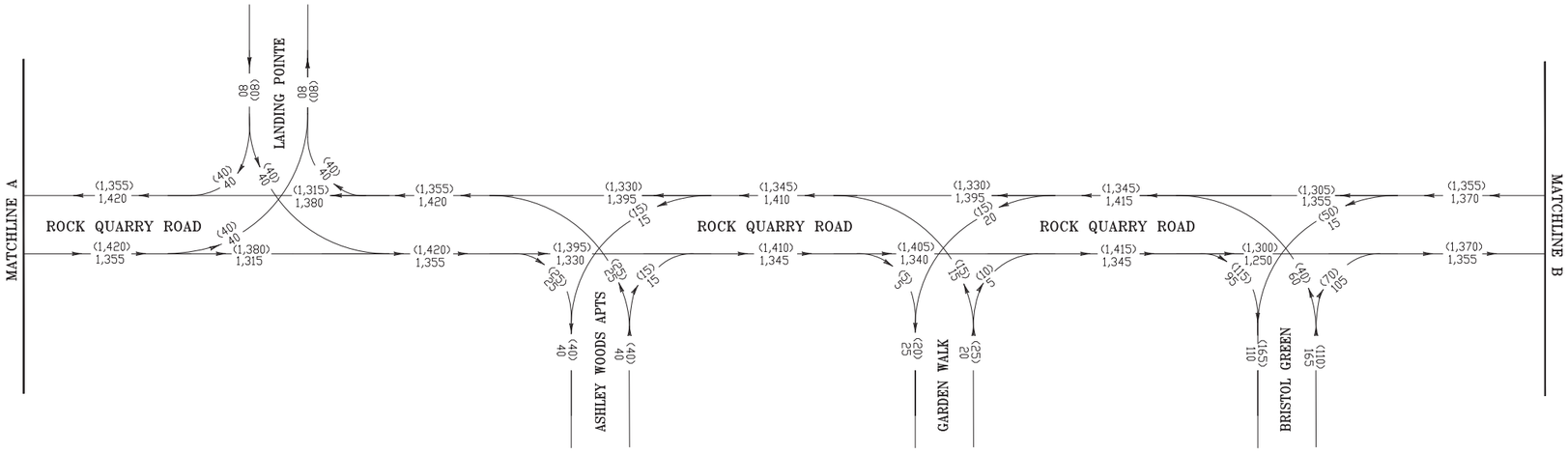
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD +2 DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	19	28

2046 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

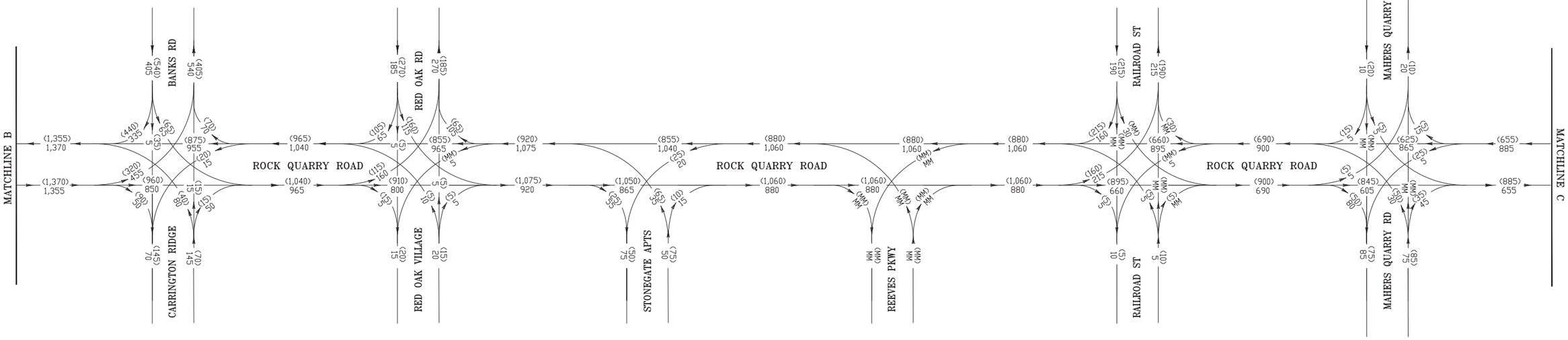
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

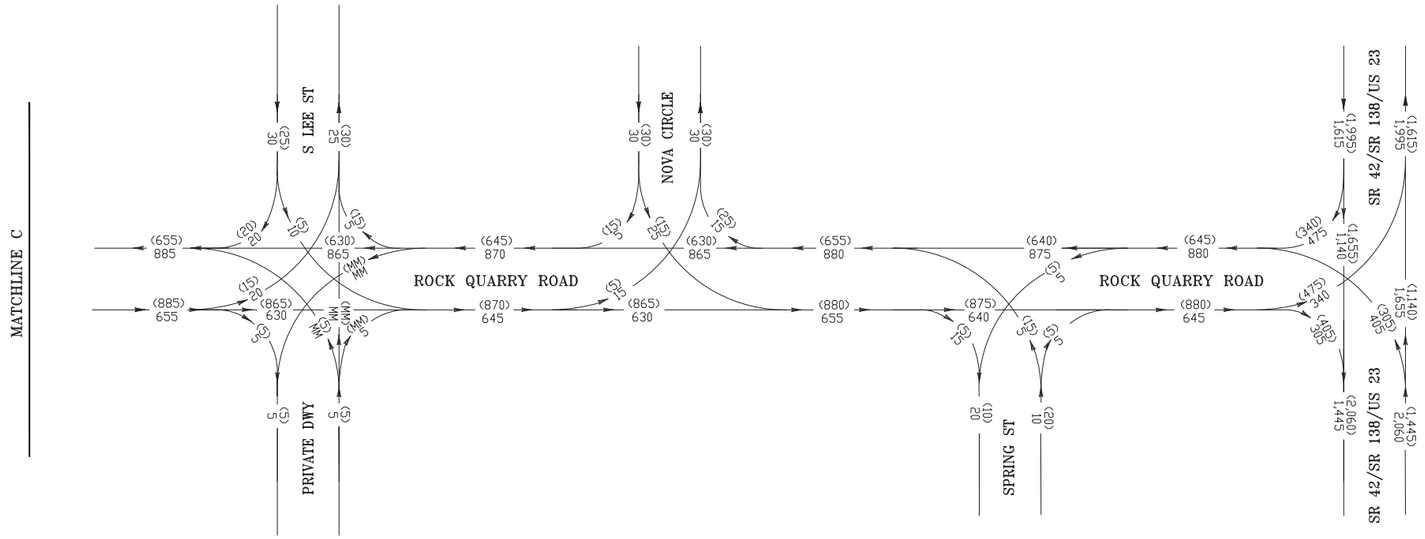
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD +2 DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	20	28

2046 NO BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

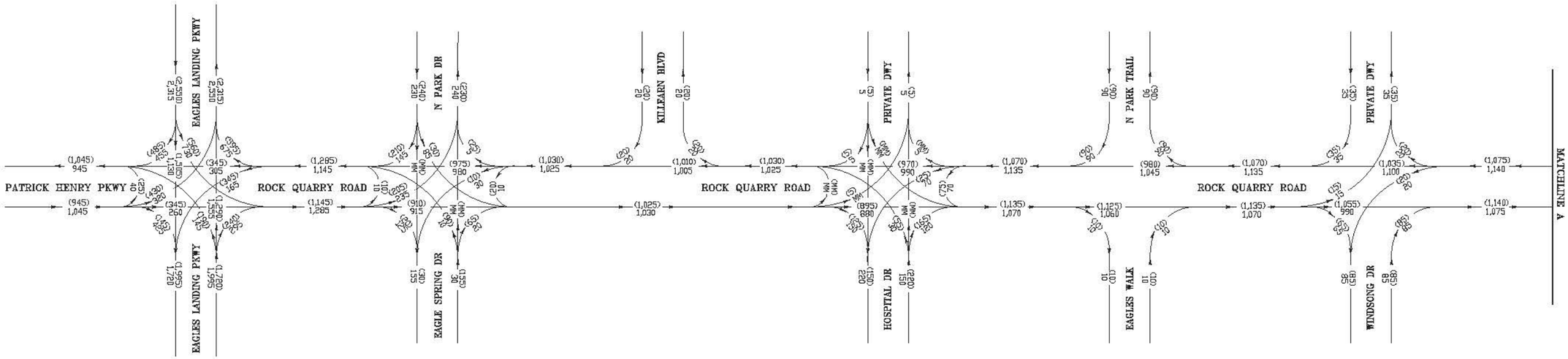
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

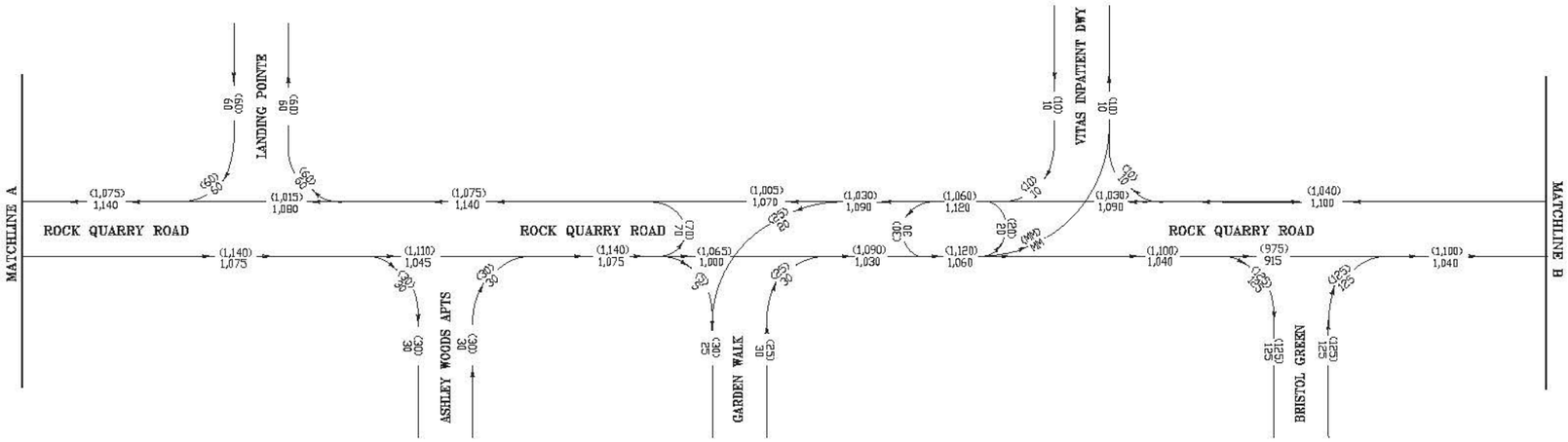
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
NO BUILD +2 DHV

DATE: 3/12/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	21	28

2024 BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-8407 FAX: (770) 971-0820

DATE	REVISIONS	DATE	REVISIONS

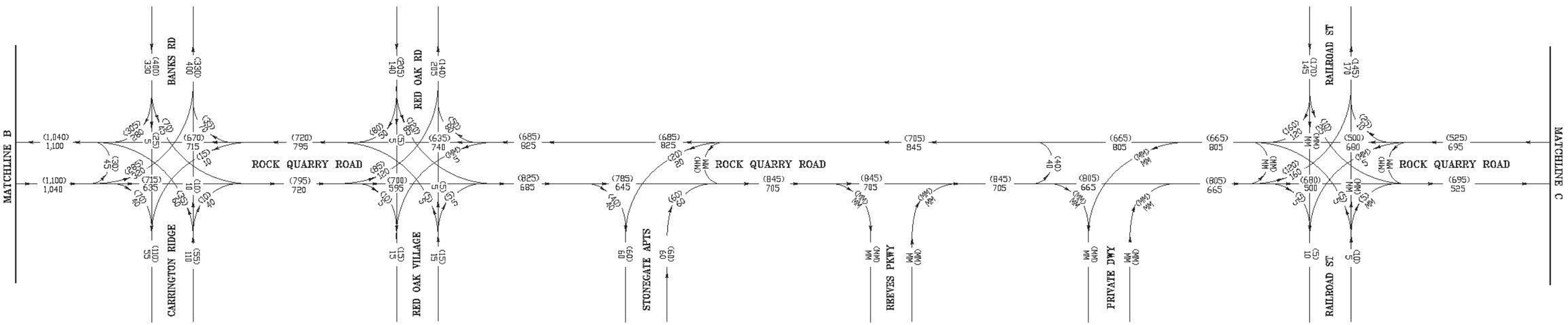
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DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

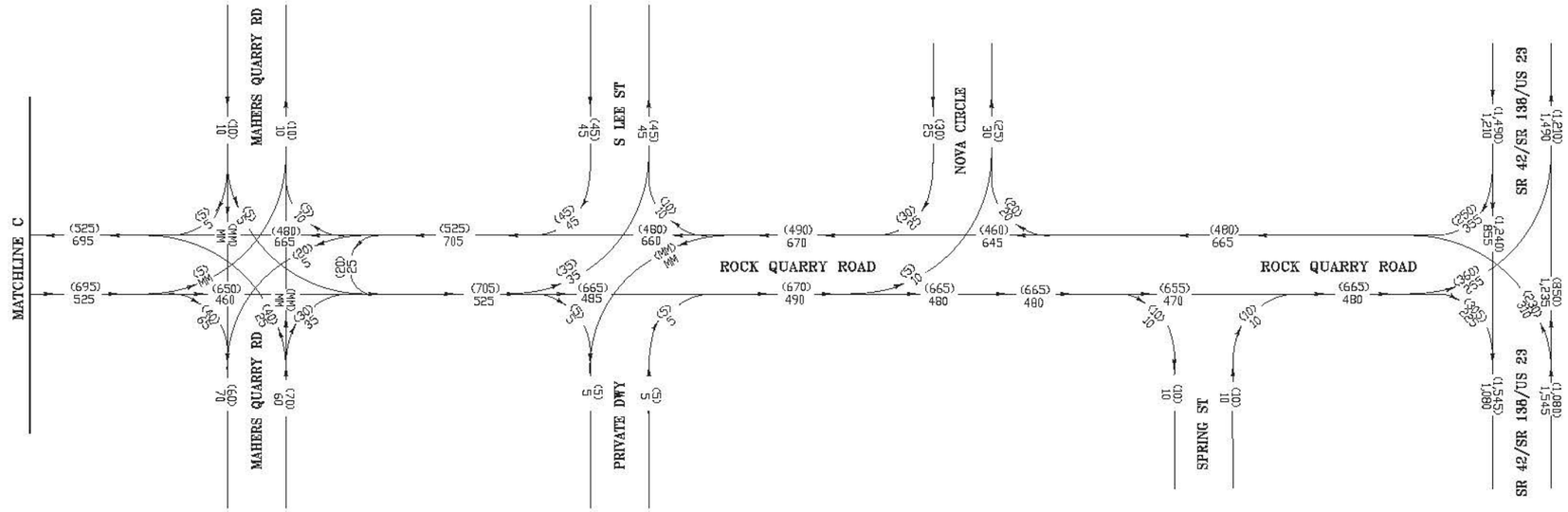
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD DHV

DATE: 5/4/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	22	28

2024 BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0820

DATE	REVISIONS	DATE	REVISIONS

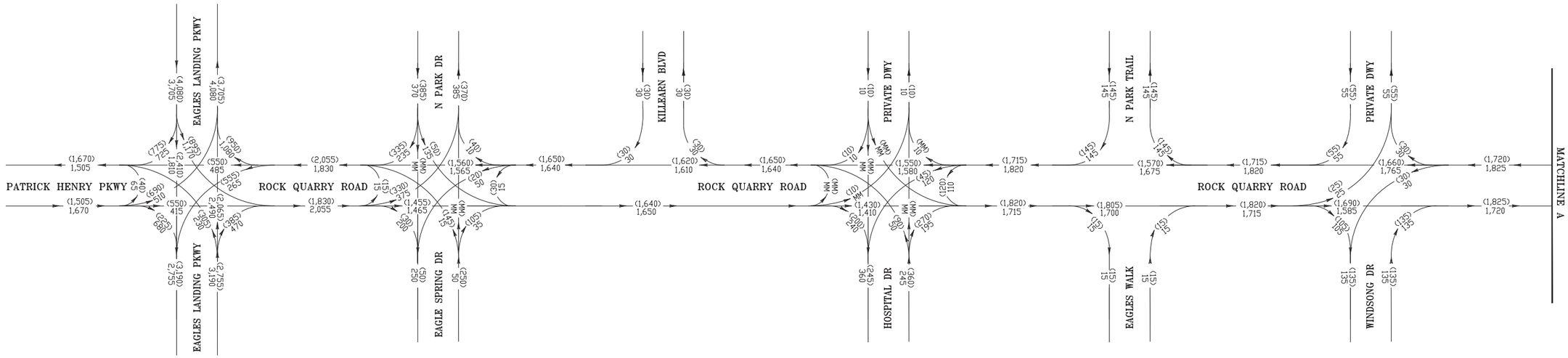
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

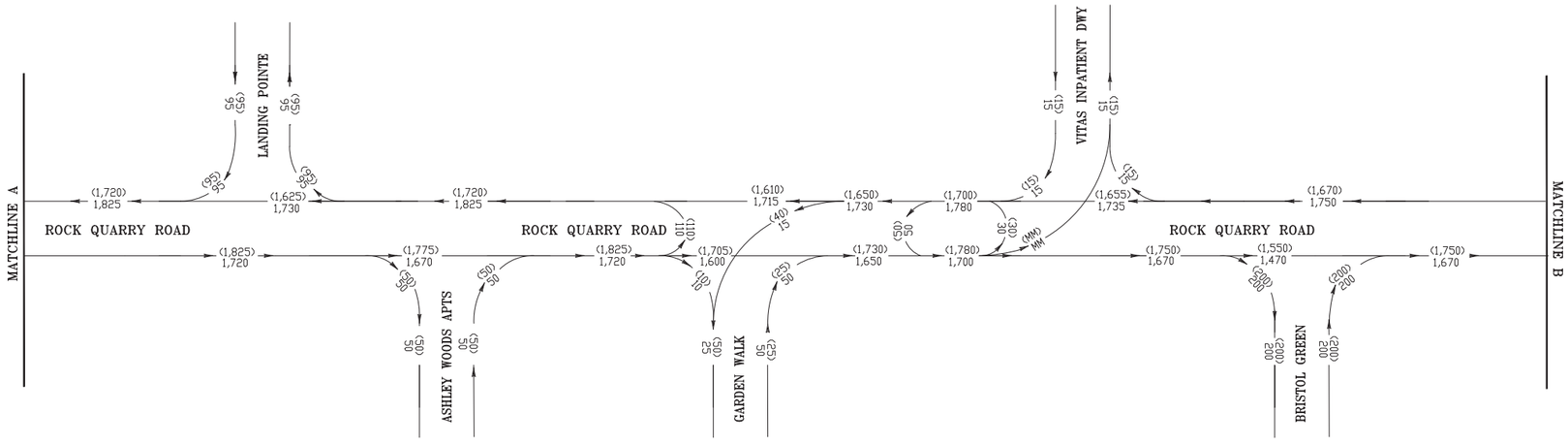
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD DHV

DATE: 3/9/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	23	28

2044 BUILD DHV





	AM PEAK % TRUCK			PM PEAK % TRUCK		
Count Location	S.U.	COMB.	TOTAL	S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

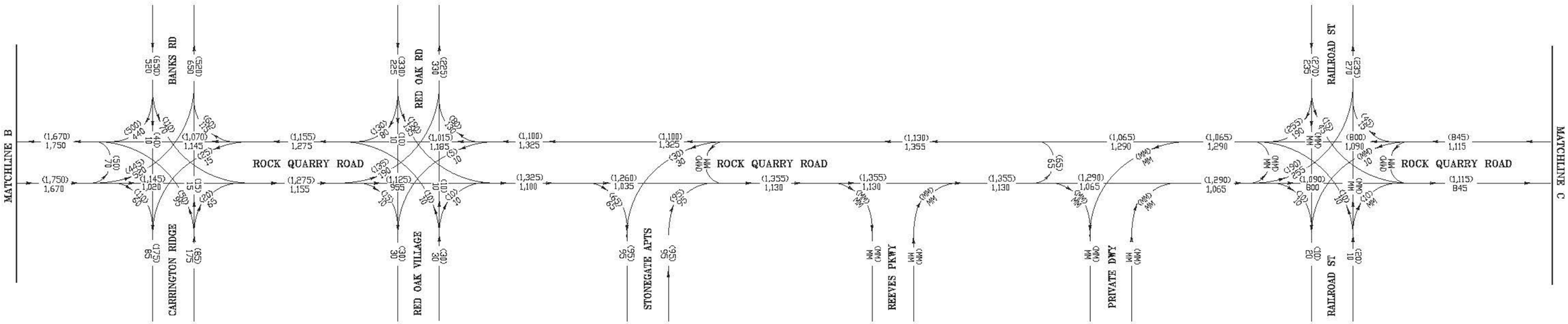
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD DHV

DATE: 5/4/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	24	28

2044 BUILD DHV



Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-8407 FAX: (770) 971-0820

DATE	REVISIONS	DATE	REVISIONS

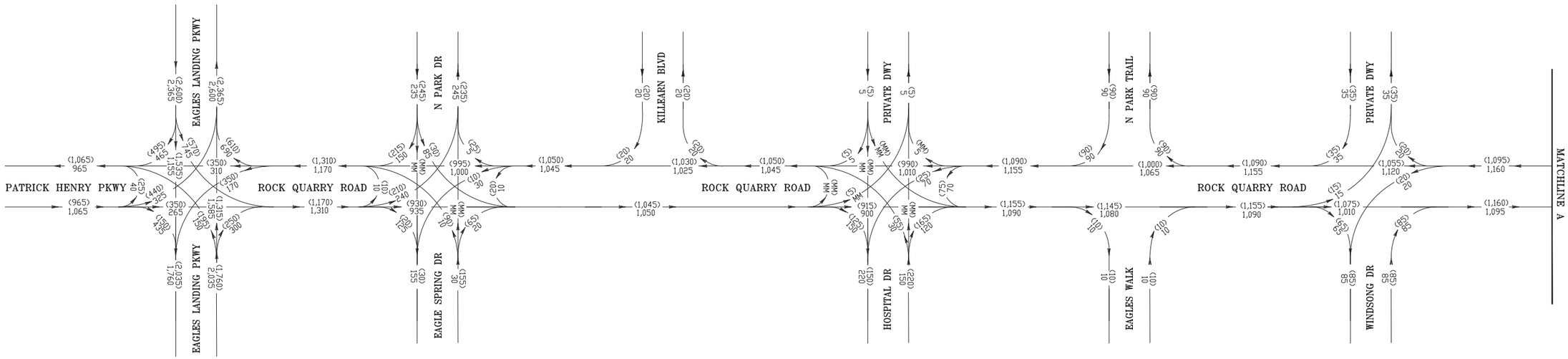
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

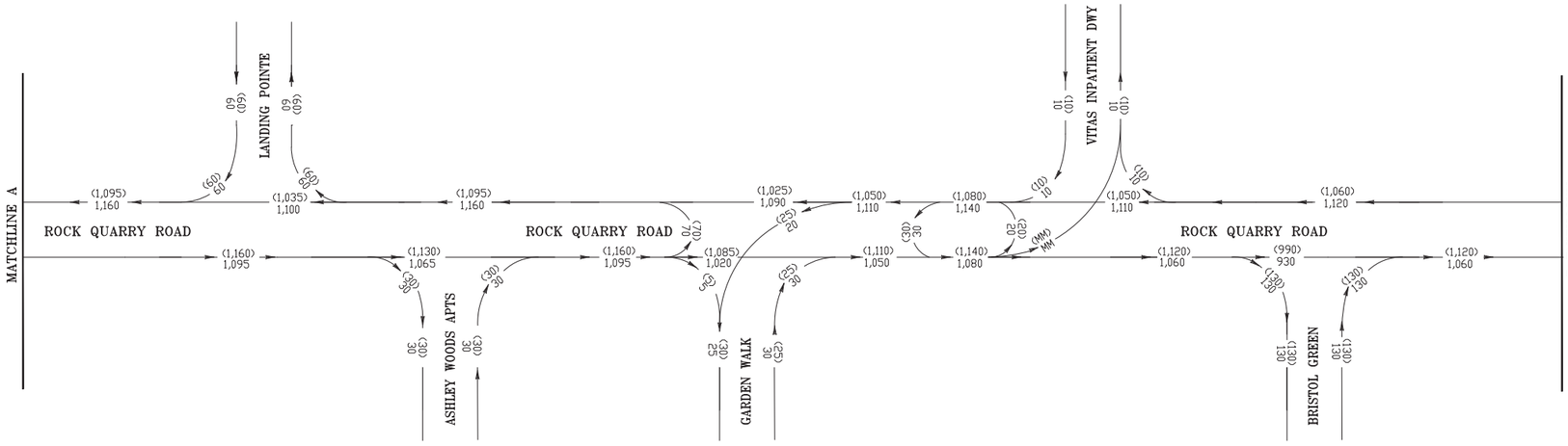
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD DHV

DATE: 3/12/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	25	28

2026 BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0620

DATE	REVISIONS	DATE	REVISIONS

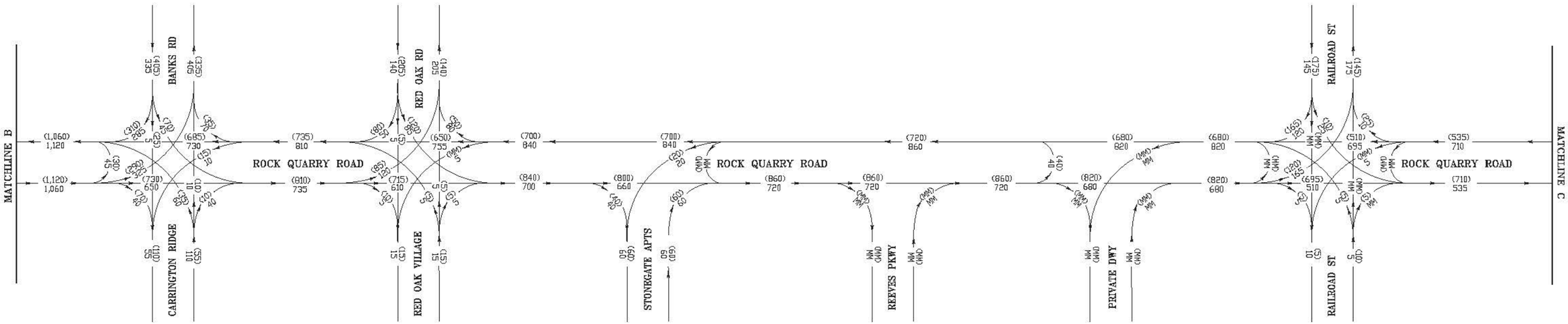
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

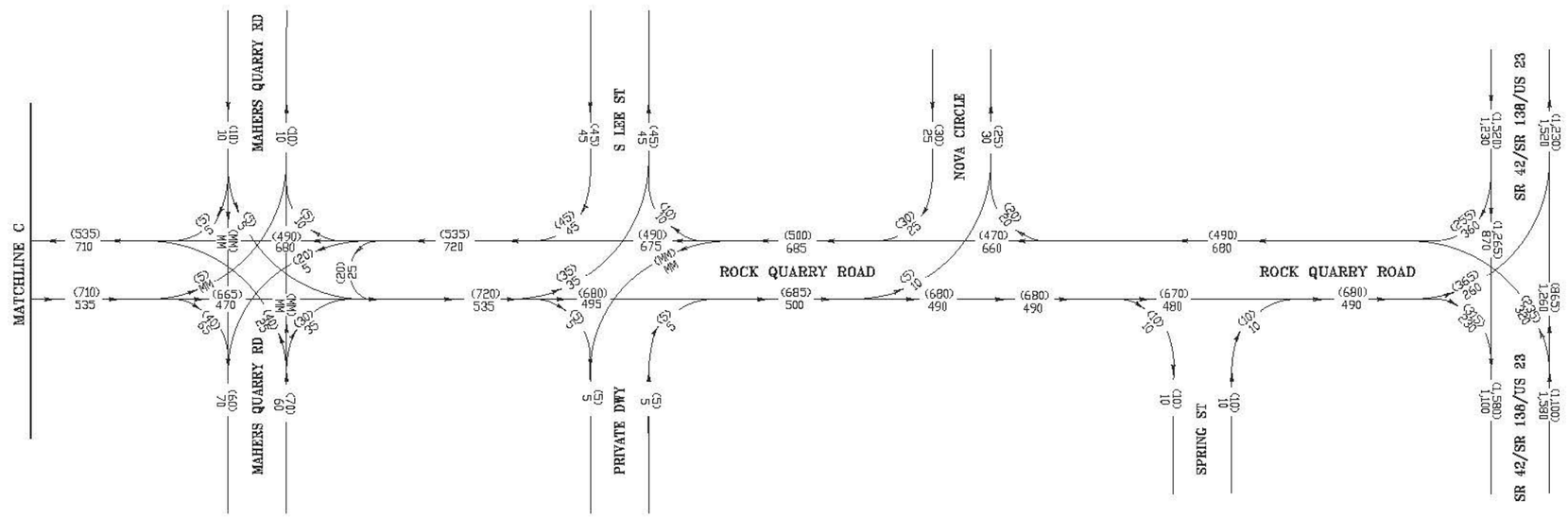
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD +2 DHV

DATE: 5/4/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	26	28

2026 BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-8407 FAX: (770) 971-0820

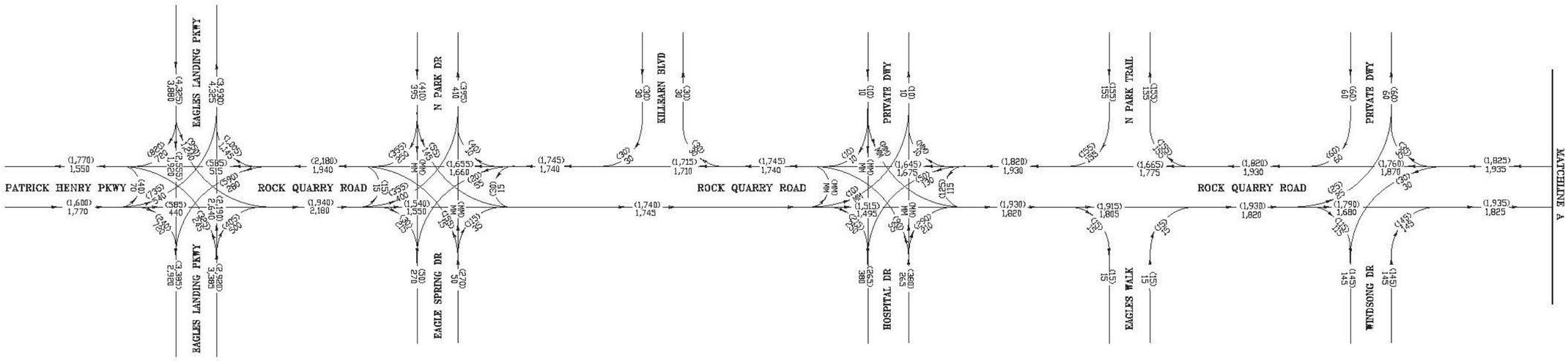
DATE	REVISIONS	DATE	REVISIONS

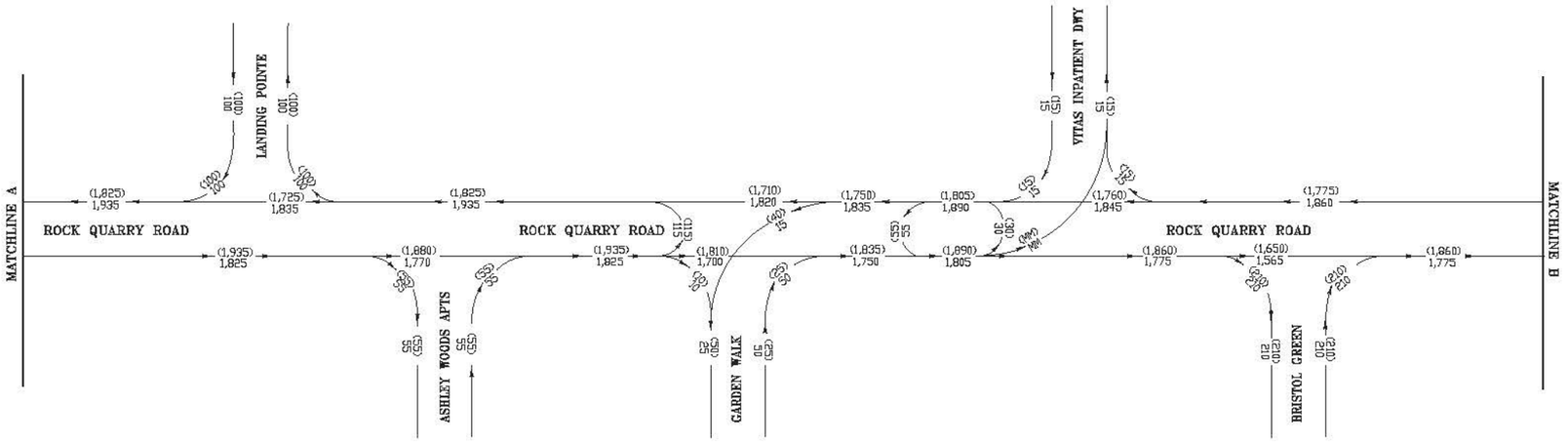
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD +2 DHV

DATE: 5/2/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	27	28

2046 BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	AM PEAK % TRUCK COMB.	AM PEAK % TRUCK TOTAL	PM PEAK % TRUCK S.U.	PM PEAK % TRUCK COMB.	PM PEAK % TRUCK TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

CROY ENGINEERING Engineers Planners Surveyors
200 NORTH COBB PARKWAY, BLDG. 400, SUITE 413
MARIETTA, GA 30062
PHONE: (770) 971-5407 FAX: (770) 971-0820

DATE	REVISIONS	DATE	REVISIONS

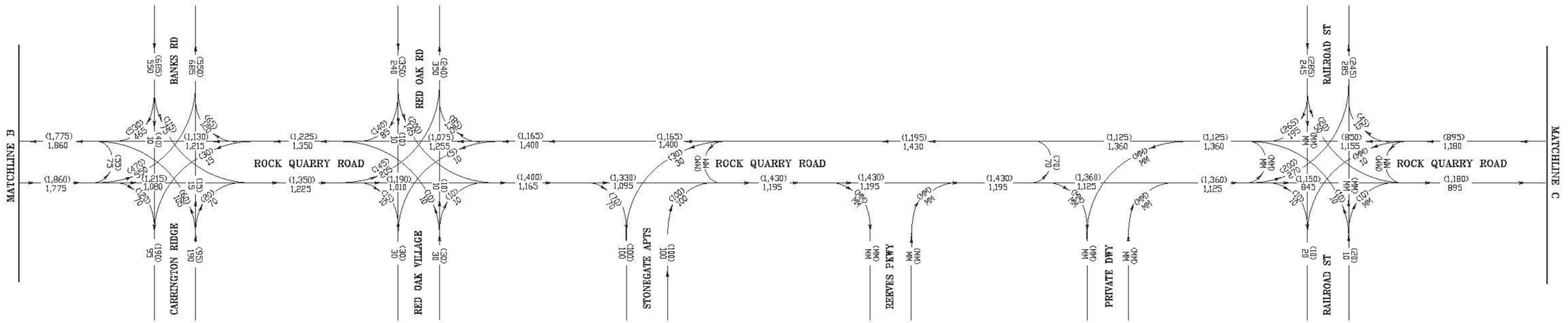
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

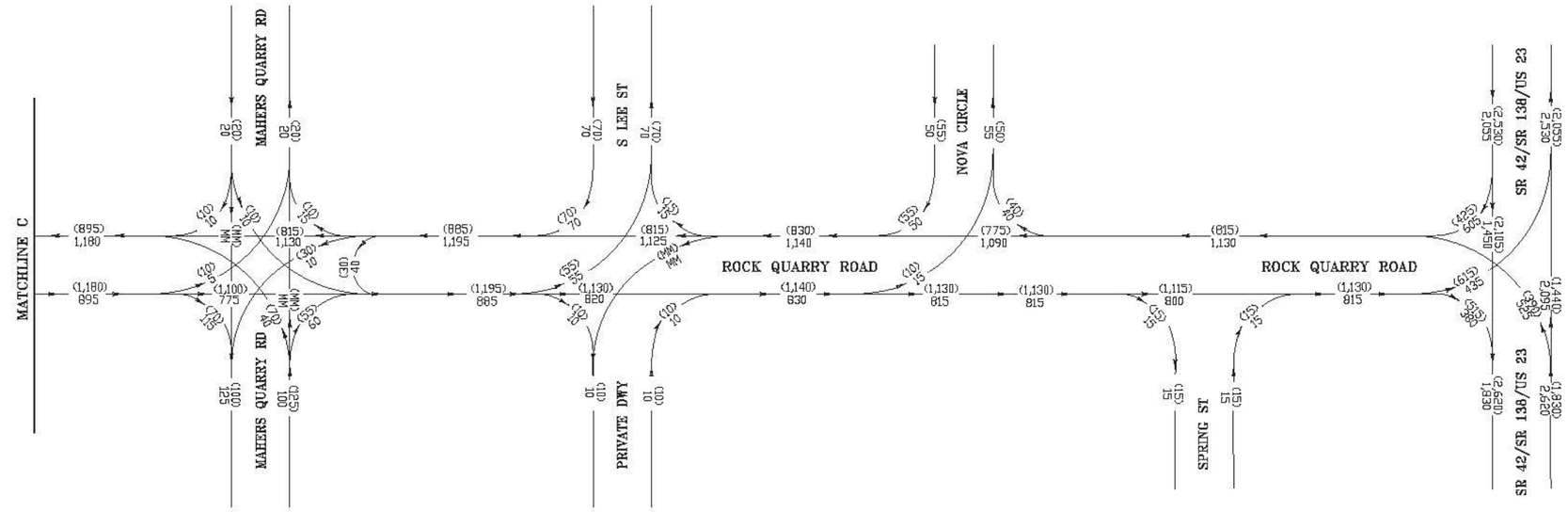
PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD +2 DHV

DATE: 5/4/2017			STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			GA	P.I. 0015090	28	28

2046 BUILD DHV





Count Location	AM PEAK % TRUCK S.U.	COMB.	TOTAL	PM PEAK % TRUCK S.U.	COMB.	TOTAL
Rock Quarry Road						
Between SR 42 and Spring St	7.00%	1.00%	8.00%	5.50%	1.50%	7.00%
Between Mahers Quarry Rd and Railroad St	9.00%	0.50%	9.50%	2.00%	0.50%	2.50%
Between Killearn Blvd & N Park Dr	5.00%	1.50%	6.50%	1.50%	0.50%	2.00%
N Henry Boulevard/SR 42/SR 138/US 23						
West of Rock Quarry Rd	6.00%	3.00%	9.00%	5.50%	2.50%	8.00%
East of Rock Quarry Rd	5.50%	1.50%	7.00%	4.50%	2.50%	7.00%
Eagles Landing Parkway						
East of Rock Quarry Rd	10.50%	6.00%	16.50%	6.50%	4.50%	11.00%
West of Rock Quarry Rd	7.00%	3.50%	10.50%	4.50%	3.00%	7.50%

(PM VOLUMES)
AM VOLUMES

SCALE: NOT TO SCALE

Georgia Department of Transportation

HENRY COUNTY GA 1821

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MARIETTA, GA 30062
PHONE: (770) 971-8407 FAX: (770) 971-0820

DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

PI# 0015090
HENRY COUNTY

ROCK QUARRY ROAD WIDENING
TRAFFIC FLOW DIAGRAMS
BUILD +2 DHV

Roadway LOS along Rock Quarry Road

	Existing		2024 No Build		2044 No Build		2024 Build		2044 Build	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
							SB/NB	SB/NB	SB/NB	SB/NB
RQR from N Henry Blvd to Banks Rd	E	E	E	E	E	E	A/A	A/A	B/A	B/B
RQR from Banks Rd to Windsong Dr	E	E	E	E	E	E	B/A	B/A	C/A	C/B
RQR from Windsong Dr to N Park Dr	E	E	E	E	E	E	B/A	B/A	C/A	C/B

Intersection LOS and Delay on Rock Quarry Road

Rock Quarry Road at	Traffic Control	Existing		2024 No Build		2044 No Build		Traffic Control	2024 Build		2044 Build	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak		AM Peak	PM Peak	AM Peak	PM Peak
N Henry Blvd/SR 42/SR 138	Traffic Signal	B (12.4 s)	C (21.3 s)	B (18.6 s)	C (28.2 s)	C (30.3 s)	D (54.5 s)	Traffic Signal	B (15.7 s)	C (23.0 s)	D (38.9 s)	E (79.0 s)
Spring St	TWSC[1]	B (13.3 s)	C (18.6 s)	C (17.3 s)	C (22.0 s)	C (24.4 s)	E (38.3 s)	RI/RO[1]	A (9.8 s)	B (10.8 s)	B (11.0 s)	B (13.2 s)
Nova Cir	TWSC[1]	C (17.4 s)	C (23.4 s)	D (27.7 s)	D (25.9 s)	F (60.9 s)	E (42.0 s)	RI/RO[1]	B (11.0 s)	B (10.4 s)	B (14.0 s)	B (12.3 s)
S Lee St (EB/WB)	TWSC[1]	B (13.0 s)/A (0.0 s)	C (14.5 s)/D (25.2 s)	C (19.3 s)/B (13.8 s)	C (15.9 s)/D (30.8 s)	D (33.3 s)/C (16.0 s)	C (20.9 s)/F (55.3 s)	RCUT[1]	B (13.2 s)/B (12.1 s)	B (10.2 s)/B (10.7 s)	C (18.9 s)/B (14.9 s)	B (12.0 s)/B (13.0 s)
Mahers Quarry Rd (EB/WB)	TWSC[1]	C (23.5 s)/C (17.4 s)	C (18.2 s)/C (15.1 s)	D (27.0 s)/D (25.0 s)	C (22.1 s)/C (24.6 s)	E (47.7 s)/E (49. 2 s)	D (26.0 s)/F (54.0 s)	TWSC[1]	C (24.8 s)/C (22.7 s)	C (17.0 s)/C (19.8 s)	F (97.5 s)/F (127.9 s)	E (40.8 s)/F(101.4 s)
Railroad St (EB/WB)	TWSC[1]	B (13.2 s)/D (30.4 s)	B (14.1 s)/C (23.4 s)	D (30.9 s)/F (97.6 s)	C (15.1 s)/D (34.5 s)	F (193.1 s)/ Err[2]	C (22.5 s)/F (91.9 s)	TWSC[1]	E (36.7 s)/ F (69.5 s)	B (13.3 s)/D (25.5 s)	Err[2]/Err[2]	D (31.5 s)/F(173.1 s)
Thomas Concrete Dwy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	RCUT[1]	A (0.0 s)	A (0.0 s)	A (0.0 s)	A (0.0 s)
Reeves Pkwy	TWSC[1]	C (16.1 s)	C (21.3 s)	D (27.6 s)	D (28.6 s)	F (51.2 s)	E (49.3 s)	RI/RO[1]	A (0.0 s)	A (0.0 s)	A (0.0 s)	A (0.0 s)
Stonegate Apts Dwy	TWSC[1]	C (18.4 s)	E (37.1 s)	F (51.0 s)	F (94.7 s)	F (172.4 s)	Err[2]	RCUT[1]	B (11.5 s)	B (12.5 s)	C (15.6 s)	C (19.2 s)
Red Oak Rd	TWSC[1]	C (15.1 s)	C (22.7 s)	F (116.8 s)/F (60.3 s)	F (129.7 s)/F (50.0 s)	Err[2]/Err[2]	Err[2]/F (177.4 s)	RCUT[1]	B (12.6 s)/B (10.9 s)	B (12.7 s)/B (11.6 s)	C (22.6 s)/B (13.6 s)	D (25.6 s)/C (15.6 s)
Banks Road/Carrington Ridge	Traffic Signal	B (16.6 s)	B (17.9 s)	C (27.0 s)	C (20.5 s)	E (77.7 s)	D (43.6 s)	Traffic Signal	B (16.9 s)	B (16.1 s)	D (46.8 s)	D (41.8 s)
Bristol Green	TWSC[1]	C (29.4 s)	E (33.5 s)	F (55.0 s)	F (51.4 s)	F (267.7 s)	D (208.0 s)	RI/RO[1]	B (13.2 s)	B (13.4 s)	D (25.1 s)	D (26.2 s)
Vitas Inpatient Care Dwy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	RCUT[1]	B (13.2 s)	B (12.8 s)	C (19.5 s)	C (18.5 s)
Garden Walk	TWSC[1]	C (18.4 s)	D (29.7 s)	E (48.0 s)	E (47.6 s)	F (187.1 s)	F (176.8 s)	RCUT[1]	C (15.3 s)	B (12.6 s)	D (26.1 s)	C (17.7 s)
Ashley Woods Apts	TWSC[1]	B (14.6 s)	C (21.3 s)	D (31.1 s)	D (30.5 s)	F (78.4 s)	F (72.5 s)	RI/RO[1]	B (12.2 s)	B (12.3 s)	C (17.3 s)	C (17.8 s)
Landing Pointe	TWSC[1]	C (15.6 s)	C (20.9 s)	E (44.2 s)	E (47.1 s)	F (263.3 s)	Err[2]	RI/RO[1]	B (13.1 s)	B (12.8 s)	D (21.5 s)	C (20.2 s)
Windsong Dr (EB/WB)	TWSC[1]	C (15.0 s)/C (15.2 s)	F (60.2 s)/E (38.3 s)	C (20.7 s)/C (29.8 s)	F (118.9 s)/E (42.6 s)	D (33.4 s)/F (132.0 s)	Err[2]/F (207.2 s)	RCUT[1]	B (13.5 s)/B (13.1 s)	B (13.1 s)/B (13.6 s)	C (21.7 s)/C (22.6 s)	C (20.1 s)/D (25.0s)
N Park Trl/Eagles Walk (EB/WB)	TWSC[1]	E (36.7 s)/A (0.0 s)	F (57.0 s)/F (52.6 s)	Err[2]/Err[2]	F (240.0 s)/F (228.1 s)	Err[2]/Err[2]	Err[2]/Err[2]	RI/RO[1]	C (15.1 s)/B (13.2 s)	B (14.3 s)/B (13.1 s)	E (37.8 s)/C (19.9 s)	D (28.7 s)/C (19.4 s)
Hospital Dr (EB/WB)	TWSC[1]	A (0.0 s)/D (25.5 s)	C (15.7 s)/F (68.9 s)	F (162.7 s)/F (78.7 s)	C (18.2 s)/F (135.9 s)	Err[2]/Err[2]	Err[2]/Err[2]	Traffic Signal	A (7.6 s)	A (8.9 s)	B (11.9 s)	B (16.1 s)
Killearn Blvd	TWSC[1]	A (0.0 s)	D (31.7 s)	F (54.0 s)	F (51.3 s)	F (199.6 s)	F (173.5 s)	RI/RO[1]	A (0.0 s)	A (0.0 s)	A (0.0 s)	A (0.0 s)
N Park Dr/Eagles Springs Dr	Traffic Signal	A (8.1 s)	B (11.6 s)	B (14.3 s)	B (15.4 s)	C (21.6 s)	C (24.1 s)	Traffic Signal	B (15.0 s)	C (23.4 s)	D (39.3 s)	E (66.8 s)

1. For unsignalized intersections with stop control only on the minor street, LOS are reported for the side street approaches.
2. "Err" is a software output representing that the delay has exceeded 300 seconds and is undefined by empirical formulas.

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TECHNICAL MEMORANDUM

To: Ricardo Maxwell
Georgia Department of Transportation, Program Delivery

From: Aimee Turner, E.I.T., IMSA TS I, Croy Engineering

Date: March 2018

RE: Summary of Traffic Engineering
Rock Quarry Road Widening (P.I. 0015090), Henry County

Introduction

This technical memorandum summarizes the traffic engineering report for the Rock Quarry Road Widening project. The Rock Quarry Road Widening project, P.I. # 0015090, will widen the existing 2-lane Rock Quarry Road to a 4-lane median divided corridor from N Park Drive/Eagles Springs Drive to N Henry Blvd/SR 138/US 23/SR 42. Improvements will also include the installation of sidewalks and a multi-use path of the east and west sides of the roadway, respectively.

Existing Conditions

Under the 2016 existing traffic conditions, all of the signalized intersections are operating at an acceptable level of service (LOS), while a considerable number of the side streets at unsignalized intersections are operating below acceptable LOS for one or both of the peak hours. Moreover, the roadway capacity of Rock Quarry Road corridor is currently below the acceptable LOS for all segments.

Crash data demonstrates that there has been a significant number of crashes along this arterial, with the majority of the crashes being contributed to rear end and angle crashes. Moreover, Rock Quarry Road's crash rates for both injuries and fatalities exceeds the State of Georgia averages for Urban Minor Arterials. There is a recognizable need to implement techniques to reduce the frequency and severity of crashes along the corridor.

No Build Analyses

Under the 2024 No Build condition, all of the signalized intersections would continue to operate at an acceptable LOS, while an increasing number of side streets at unsignalized intersections would be operating below acceptable LOS for one or both of the peak hours. Moreover, the roadway capacity of Rock Quarry Road corridor would continue to operate below the acceptable LOS for all segments.

By the 2044 design year, the majority of the signalized and unsignalized intersections would be operating below the acceptable LOS, many of which having delay exceeding the software parameters. The Rock Quarry Road corridor is below the acceptable LOS for all segments based on the capacity analysis.

Signal Warrant and Intersection Control Evaluation (ICE) Analyses

With the added capacity from the road widening, signal warrant analyses were conducted at three intersections that were identified as potentially suitable locations for a traffic signal. The three intersections evaluated for a traffic signal installation along Rock Quarry Road are Hospital Drive, Windsong Drive, and Red Oak Road. In conjunction with the signal warrant analysis, GDOT's Roundabout Tool was used to determine if a roundabout at the aforementioned intersections would be a suitable alternative. The final recommendations from the signal warrant analyses are shown in Table 1 for each intersection.

Table 1: Rock Quarry Road Signal Warrant Analyses Results

	Warrants Met?	Signal Recommended?
Hospital Drive at Rock Quarry Road	Yes	Yes
Windsong Drive at Rock Quarry Road	No	No
Red Oak Road at Rock Quarry Road	No	No

Per GDOT Policy 4A-5, Intersection Control Evaluation (ICE), GDOT requires the completion of an ICE Tool for all intersection improvements where at least one of the intersecting roadways is designated as a State Route or the design and construction of the project includes State or Federal funding. A Stage 1 Screening and Stage 2 Alternative Selection tool was completed for each intersection, and the final build alternatives are listed in Table 2 below.

Table 2: ICE Analysis Build Alternatives per Intersection

Rock Quarry Road at	Build Alternative
N Henry Blvd/SR 42/SR 138	Traffic Signal[1]
Spring Street	RI/RO
Nova Circle	RI/RO
S Lee Street	RCUT
Mahers Quarry Road	TWSC
Railroad Street	TWSC[2]
N U-Turn/Thomas Concrete Dwy	RCUT
Reeves Parkway	RI/RO
Stonegate Apartments Driveway	RCUT
Red Oak Road	RCUT
Banks Road/Carrington Ridge	Traffic Signal[1 2]
Bristol Green	RI/RO
S U-Turn/Vitas Inpatient Care Dwy	RCUT[2]
Garden Walk	RCUT
Ashley Woods Apartments Driveway	RI/RO
Landing Pointe	RI/RO
Windsong Drive	RCUT
North Park Trail/Eagles Walk	RI/RO
Hospital Drive	Traffic Signal
Killearn Boulevard	RI/RO
Thomas Concrete Driveway	RCUT
VITAS Inpatient Facility Driveway	RCUT [2]

1. The existing traffic control configuration was maintained.
2. The Build Alternative differs from the ICE Tool's preferred alternative.

Build Analyses

Under the 2024 Build conditions, the analysis shows that the Build condition would decrease the delay and improve the roadway LOS for all of the intersections with the exception of Railroad Street during the morning peak hour. With the added capacity on Rock Quarry Road under the Build conditions, the ensuing increase in traffic volumes has an unacceptable impact on operations at unsignalized intersections. By the 2044 design year, signalized and unsignalized intersections would be operating at undesirable LOS for one or both peak hours. The 2044 Build Rock Quarry Road corridor LOS would be at an acceptable LOS for all segments based on the capacity analysis.

In terms of safety, the Crash Modification Factors (CMF) Clearinghouse gives a CMF of 0.341 for converting a 2-lane roadway to 4-lane divided roadway, which would theoretically results in a 66% reduction in crashes under the Build condition.

Conclusion

Based on the findings of this analysis, the Rock Quarry Road project to widen to 4-lane median divided corridor yields advantageous benefits encompassing improvements to traffic operations, including improved LOS and reductions in delay, anticipated crash reductions, and improvements to bike and pedestrian accommodations.

All data pertaining to the traffic engineering analysis including the full traffic forecasting report, traffic diagrams, ICE Documentation, and traffic engineering report were submitted to GDOT as separate deliverables and are available upon request.

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TECHNICAL MEMORANDUM

To: Christina Barry, P.E.
Georgia Department of Transportation, Office of Traffic Operations

From: Aimee Turner, E.I.T., IMSA TS II, Croy Engineering

Date: March 9, 2018

RE: ICE Analysis Concurrence and Waiver Requests
Rock Quarry Road Widening (P.I. 0015090), Henry County

Introduction

The purpose of this memorandum is to summarize the results of the Intersection Control Evaluation (ICE) analysis for P.I. 0015090, Rock Quarry Road Widening, for concurrence from the Office of Traffic Operations. The project will widen the existing 2-lane Rock Quarry Road to a 4-lane median divided corridor starting at N Henry Blvd/SR 138/US 23/SR 42 and tie in north of N Park Drive/Eagles Springs Drive. Figure 1 displays the preliminary concept design.



Figure 1: Rock Quarry Road Widening Preliminary Concept Design

GDOT requires the completion of an ICE Analysis per GDOT Policy 4A-5 for all intersection improvements where at least one of the intersecting roadways is designated as a State Route or the design and construction of the project includes State or Federal funding. It is important to note that the traffic engineering analysis for P.I. 0015090 was more than mid-way at the time supplemental revisions were made to the ICE policy related to the submission of Stage 1-Screening Decision Record for concurrence before proceeding to Stage 2 – Alternate Selection Decision Record for approval. Thus, this memo summarizes the findings of both Stage 1 and Stage 2 as they were done in succession prior to the revisions to the ICE policy.

Stage 1: Screening Decision Record

A Stage 1 Screening was completed for all study intersections along Rock Quarry Road. A number of unsignalized and signalized traffic control alternatives were evaluated per intersection. Alternatives were selected based on their ability to address the operational and safety concerns at the intersection while being context-sensitive to the the corridor as a whole.

With the added capacity from the road widening, signal warrant analyses were conducted at three intersections that were identified as potentially suitable locations for a traffic signal. The three intersections evaluated for a traffic signal installation along Rock Quarry Road were Hospital Drive, Windsong Drive, and Red Oak Road. A traffic signal was warranted at Hospital Drive; thus, a traffic signal was included as an alternative to be evaluated for their respective ICE analyses. Table 1 shows alternative selected to review.

Table 1: ICE Analysis Build Alternatives per Intersection

Rock Quarry Road	Alternative 1	Alternative 2	Alternative 3
at SR 42/N Henry Blvd	Traffic Signal	Continuous Green T	Multilane Rndbt
at Spring St	RI/RO		
at Nova Cir	RI/RO		
at S Lee St	RCUT	RI/RO	Multilane Rndbt
at Mahers Quarry Rd	TWSC	RCUT	Multilane Rndbt
at Railroad St	TWSC	Multilane Rndbt	RCUT
at N U-Turn/Thomas Concrete	RCUT	RI/RO	
at Reeves Pkwy	RI/RO		
at Stonegate Apts	RCUT	RI/RO	
at Red Oak Rd	RCUT	Multilane Rndbt	Traffic Signal
at Banks Rd	Traffic Signal	Multilane Rndbt	RCUT
at Bristol Green	RI/RO		
at Vitas Inpatient	RCUT	RI/RO	
at Garden Walk	RCUT	RI/RO	
at Ashley Wood Apts	RI/RO		
at Landing Pointe	RI/RO		
at Windsong Dr	RCUT	RI/RO	
at N Park Trl/Eagles Walk	RI/RO		
at Hospital Dr	Traffic Signal	Multilane Rndbt	RCUT
at Killearn Blvd	RI/RO		

A full ICE analysis, Stage 1 and Stage 2 documentation, was only required at the one on-system intersection, Rock Quarry Road at SR 42/SR 138/N Henry Boulevard. Although Stage 2 documentation is not required for linear projects' intersections, a high-level Stage 2 analysis was completed for each intersection to further document the ranking of each alternative per intersection.

Stage 2: Alternative Selection Decision Record

During Stage 2 of the analysis, a review of existing conditions and a comparison of project costs, traffic operations, safety factors, environmental impacts, and stakeholders' input per alternative was completed. Taking into account the aforementioned criteria, the ICE Tool scored and ranked each alternative. Following a review of the highest scored alternatives at each intersection, how each fit in the context of the entire corridor, and consulting with Henry County, the final preferred alternatives for traffic control were selected.

Table 8 lists the traffic control alternative recommended for the Build condition per intersection as part of the widening of Rock Quarry Road. The preliminary concept design and all ICE Tool spreadsheets are attached.

Table 2: ICE Analysis Build Alternatives per Intersection

Rock Quarry Road at	Build Alternative
N Henry Blvd/SR 42/SR 138	Traffic Signal[1]
Spring Street	RI/RO
Nova Circle	RI/RO
S Lee Street	RCUT
Mahers Quarry Road	TWSC
Railroad Street	RCUT[2]
Thomas Concrete Dwy	RCUT
Reeves Parkway	RI/RO
Stonegate Apartments Driveway	RCUT
Red Oak Road	RCUT
Banks Road/Carrington Ridge	Traffic Signal[1 2]
Bristol Green	RI/RO
Vitas Inpatient Care Dwy	RCUT[2]
Garden Walk	RCUT
Ashley Woods Apartments Driveway	RI/RO
Landing Pointe	RI/RO
Windsong Drive	RCUT
North Park Trail/Eagles Walk	RI/RO
Hospital Drive	Traffic Signal
Killearn Boulevard	RI/RO

1. The existing traffic control configuration was maintained.
2. The Build Alternative differs from the ICE Tool's preferred alternative.

Waiver Requests

With the widening of Rock Quarry Road, a waiver of the ICE Analysis is requested for all intersections that will be reconfigured to right-in/right-out access only. The justification for the waiver is the limited access due to the closed median.

There are three instances where the preferred alternative from the ICE Tool is not recommended for the Build condition. The three intersections are Rock Quarry Road at Railroad Street, at Banks Road, and at the entrance to VITAS Inpatient Facility, respectively. A waiver for deviation from the ICE Tool's preferred alternative at the three intersections above is requested. The justification for the build alternative per intersection is listed below:

At Railroad Street:

- **ICE Tool's Recommendation:** Restricted crossing U-turn (RCUT)
- **Build Alternative Selection:** Conventional minor stop (TWSC)
- **Justification:** A conventional minor stop is recommended versus the ICE Tool's preferred alternative of a Right-In/Right-out because of the negative impact the number of tractor trailers exiting the side streets would have on downstream U-turns.

At Banks Road:

- **ICE Tool's Recommendation:** Multi-lane Roundabout
- **Build Alternative Selection:** Traffic Signal
- **Justification:** Maintaining the existing traffic light at Banks Road was recommended versus the ICE Tool's preferred alternative of a roundabout because of the projected costs of the roundabout design. Considering the grades approaching Banks Road, northbound - 6.1% and southbound - 1.7%), a more detailed cost estimate was completed to show more realistic project costs. To accommodate the inscribed diameter of a multi-lane roundabout at this intersection, it would require a total take of the commercial properties at 880-890 Rock Quarry Road. The total cost to install a multi-lane roundabout is approximate 3 times that to install a traffic signal. Moreover, Henry County has expressed the desire to maintain the existing signalized traffic control at the intersection.

At VITAS Inpatient Facility Driveway:

- **ICE Tool's Recommendation:** Right-in/Right-Out with Downstream U-turn
- **Build Alternative Selection:** Restricted crossing U-turn (RCUT)
- **Justification:** Need to accommodate the frequency of emergency vehicles accessing the VITAS Inpatient Facility.

Attachments

A. ICE Multi-file Summary Report
B. ICE Waiver Forms
C. ICE Supporting Documentation
D. Rock Quarry Road Preliminary Concept Design

CC: Ricardo Maxwell, GDOT – Office of Program Delivery
Roque Romera-Muniz, Henry County SPLOST
Chris Rideout, P.E., Croy Engineering
Daniel B. Dobry, Jr., P.E., PTOE, AICP, Croy Engineering
Andrew Romain, P.E., Croy Engineering

ICE v2.12 Multi-File Summary Report

Stage 2 Decision Document PI# 0015090

Study Intersection	Existing Intersection Type	Waiver Request Intersection Type	UNSIGNALIZED													SIGNALIZED											
			Conventional (Minor Stop)	Conventional (All-Way Stop)	Mini Roundabout	Single Lane Roundabout	Multilane Roundabout	RCUT (stop control)	RIRO w/down stream U-Turn	High-T (unsignalized)	Offset-T Intersections	Diamond Interch (Stop Control)	Diamond Interch (RAB Control)	Add Turn Ln/Median (Unsig)	Other Unsignalized	Traffic Signal	Median U-Turn (Indirect Left)	RCUT (signalized)	Displaced Left Turn (CFI)	Continuous Green-T	Jughandle	Quadrant Roadway	Diamond Interch (Signal Control)	Diverging Diamond	Single Point Interchange	Add Turn Ln/Median (Signal)	Other Signalized
RQR @ SR 42/N HENRY BLVD	TRAFFIC SIGNAL						5.7									**6.0**				3.7							
RQR @ SPRING ST	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ NOVA CIR	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ S LEE ST	CONVENTIONAL (MINOR STOP)						7.6	**7.8**	7.6																		
RQR @ MAHERS QUARRY RD	CONVENTIONAL (MINOR STOP)		**5.9**				4.8	5.4																			
RQR @ RAILROAD ST	CONVENTIONAL (MINOR STOP)	CONVENTIONAL (MINOR STOP)	4.9				7.1	**7.2**																			
RQR @ THOMAS CONCRETE	CONVENTIONAL (MINOR STOP)							**4.1**	2.3																		
RQR @ REEVES PKWY	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ STONEGATE APTS	CONVENTIONAL (MINOR STOP)							**5.5**	5.3																		
RQR @ RED OAK RD	CONVENTIONAL (MINOR STOP)						7.3	**7.4**								0.0											
RQR @ BANKS RD	TRAFFIC SIGNAL	TRAFFIC SIGNAL					**6.6**	4.8								4.9											
RQR @ BRISTOL GREEN	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ VITAS INPATIENT	CONVENTIONAL (MINOR STOP)	RCUT						5.6	**5.7**																		
RQR @ GARDEN WALK	CONVENTIONAL (MINOR STOP)							**7.2**	7.1																		
RQR @ ASHLEY WOODS APT	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ LANDING POINTE RQR @ WIN	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ N PARK TRL/EAGLES WALK	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									
RQR @ HOSPITAL DR	CONVENTIONAL (MINOR STOP)						7.2	7.5								**7.6**											
RQR @ KILLEARN BLVD	CONVENTIONAL (MINOR STOP)	*RI/RO W. U-TURN*																									

Approved by: _____ **Date:** _____ **Name:** _____

Chief Engineer or (Approved Delegate)

RIRO Waivers for Multiple Locations

Project PI# (if applicable): 0015090

Study Intersection	Existing Intersection Type	Avg Daily Traffic (ADT)		Traffic Operations (optional):[1] Opening Year		Design Year	
		Major Rd	Minor Rd	Delay	V/C	Delay	V/C
RQR @ SPRING ST	Conventional (Minor Stop)	12,750	150	9.8 sec	0.01	11.0 sec	0.03
RQR @ NOVA CIR	Conventional (Minor Stop)	13,200	900	11.0 sec	0.05	14.0 sec	0.10
RQR @ REEVES PKWY	Conventional (Minor Stop)	16,400	100	0.0 sec	0.00	0.0 sec	0.00
RQR @ BRISTOL GREEN	Conventional (Minor Stop)	21,750	2,150	13.2 sec	0.23	25.1 sec	0.54
RQR @ ASHLEY WOODS APTS	Conventional (Minor Stop)	24,700	1,300	12.2 sec	0.06	17.3 sec	0.15
RQR @ LANDING POINTE	Conventional (Minor Stop)	24,700	2,850	13.1 sec	0.12	21.5 sec	0.31
RQR @ N PARK TRL/EAGLES WALK	Conventional (Minor Stop)	24,300	1,300	14.2 sec	0.12	28.9 sec	0.34
RQR @ KILLERAN BLVD	Conventional (Minor Stop)	24,450	250	0.0 sec	0.00	0.0 sec	0.00

[1] Capacity data is optional unless needed to justify basis of the waiver request.

Approved By: _____ Date: _____ Name: _____

Chief Engineer or (Approved Delegate)

GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.01
Revised 9/18/2017

Waiver Request - Level 1

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection is along a divided, multilane roadway and will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
   - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
   - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
   - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
   - The proposed changes are not expected to adversely affect safety

A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Chief Engineer / District Engineer (or delegate). Any questions regarding the waiver process may be routed to the State Traffic Engineer.

Project Information:

Location:	Rock Quarry Road @ Railroad St	Date:	1/8/2018
Requested By:	GDOT	Area Type:	Suburb/Transition
County:	Henry	Prepared By:	Croy Engineering
GDOT District:	3 - Thomaston	Analyst:	SR
Existing Intersection Control:	Conventional (Minor Stop)	Waiver Request Type:	GDOT PDP Project w/Control Change

Traffic Data [1]

Intersection meets signal/AWS warrants?	None
Existing Avg Daily Traffic (Major Street):	13,075
Existing Avg Daily Traffic (Minor Street):	4,600
Existing Analysis Year:	2016 (AM)
Existing Peak Hour Intersection Delay:	24.7 sec
Existing Intersection V/C ratio:	0.13
Future No-Build Analysis Year:	2024(AM)
Design Yr Peak Hour Intersection	96.7 sec
Design Yr Intersection V/C ratio:	0.37

Note: Use worst case AM/PM hour for all analyses

[1] Optional data where changes do not impact traffic operations but otherwise required

Crash Data (Required)

5 most recent years of intersection crash data		*Crash Severity*		
		PDO	Injury Crash	Fatal Crash
Crash Type	Angle	0	0	0
	Head-On	0	0	0
	Rear End	3	0	0
	Sideswipe - same	0	0	0
	Sideswipe - opposite	0	0	0
	Not Collision w/Motor Veh	6	1	0
	TOTALS:	9	1	0

Description of Work / Justification for Waiver (Required): The Rock Quarry Road Widening project will widen the existing 2-lane Rock Quarry Road to a 4-lane median divided corridor from N Park Drive/Eagles Spring Drive to N Henry Boulevard/SR 1318/SR 42/US 23. Improvements will also include improved pedestrian accommodations along both sides of roadway. JUSTIFICATION FOR WAVIER: A conventional minor stop is recommended versus the ICE Tool's preferred alternative of a Right-In/Right-out because of the negative impact the number of tractor trailers exiting the side streets would have on downstream U-turns.

REQUESTED BY: Daniel B Dobry Jr Date: Jan 16, 2018

Name: DANIEL B. DOBRY, JR, P.E, PTOE, AICP

Title: TRAFFIC ENGINEERING MANAGER

APPROVED BY: _____ Date: _____

Name: _____

Chief Engineer or (Approved Delegate)

GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.01
Revised 9/18/2017

Waiver Request - Level 1

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection is along a divided, multilane roadway and will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
   - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
   - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
   - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
   - The proposed changes are not expected to adversely affect safety

A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Chief Engineer / District Engineer (or delegate). Any questions regarding the waiver process may be routed to the State Traffic Engineer.

Project Information:

Location:	Rock Quarry Road @ Banks Rd	Date:	1/8/2018
Requested By:	GDOT	Area Type:	Suburb/Transition
County:	Henry	Prepared By:	Croy Engineering
GDOT District:	3 - Thomaston	Analyst:	SR
Existing Intersection Control:	Signal (turn lanes on mainline)	Waiver Request Type:	GDOT PDP Project w/Control Change

Traffic Data [1]

Intersection meets signal/AWS warrants?	Meets Signal Warrants
Existing Avg Daily Traffic (Major Street):	16,900
Existing Avg Daily Traffic (Minor Street):	8,600
Existing Analysis Year:	2016 (AM)
Existing Peak Hour Intersection Delay:	19.6 sec
Existing Intersection V/C ratio:	0.60
Future No-Build Analysis Year:	2024 (AM)
Design Yr Peak Hour Intersection	20.5
Design Yr Intersection V/C ratio:	0.77

Note: Use worst case AM/PM hour for all analyses

[1] Optional data where changes do not impact traffic operations but otherwise required

Crash Data (Required)

Crash Type — *5 most recent years of intersection crash data*	*Crash Severity* PDO	Injury Crash	Fatal Crash
Angle	13	8	0
Head-On	0	1	0
Rear End	23	19	0
Sideswipe - same	4	0	0
Sideswipe - opposite	1	1	0
Not Collision w/Motor Veh	9	4	0
TOTALS:	50	33	0

Description of Work / Justification for Waiver (Required): The Rock Quarry Road Widening project will widen the existing 2-lane Rock Quarry Road to a 4-lane median divided corridor from N Park Drive/Eagles Spring Drive to N Henry Boulevard/SR 1318/SR 42/US 23. Improvements will also include improved pedestrian accommodations along both sides of roadway. JUSTIFICATION FOR WAVIER: Maintaining the existing traffic light at Banks Road was recommended versus the ICE Tool's preferred alternative of a roundabout because of the projected costs of the roundabout design and Henry County's desire to maintain the existing traffic control.

REQUESTED BY: Daniel B Dobbs Jr Date: Jan 16, 2018

Name: DANIEL B. DOBBS, JR. P.E PTOE, AICP

Title: TRAFFIC ENGINEERING MANAGER

APPROVED BY: _____ Date: _____

Name: _____

Chief Engineer or (Approved Delegate)

GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.01
Revised 9/18/2017

Waiver Request - Level 1

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection is along a divided, multilane roadway and will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
   - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
   - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
   - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
   - The proposed changes are not expected to adversely affect safety

A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Chief Engineer / District Engineer (or delegate). Any questions regarding the waiver process may be routed to the State Traffic Engineer.

Project Information:

Location:	Rock Quarry Road @ Vitas Inpatient	Date:	1/8/2018
Requested By:	GDOT	Area Type:	Suburb/Transition
County:	Henry	Prepared By:	Croy Engineering
GDOT District:	3 - Thomaston	Analyst:	SR
Existing Intersection Control:	Conventional (Minor Stop)	Waiver Request Type:	GDOT PDP Project w/Control Change

Traffic Data [1]

Intersection meets signal/AWS warrants?	None
Existing Avg Daily Traffic (Major Street):	22,200
Existing Avg Daily Traffic (Minor Street):	300
Existing Analysis Year:	2016 (AM)
Existing Peak Hour Intersection Delay:	0.0 sec
Existing Intersection V/C ratio:	0.00
Future No-Build Analysis Year:	2024 (AM)
Design Yr Peak Hour Intersection	0.0 sec
Design Yr Intersection V/C ratio:	0.00

Note: Use worst case AM/PM hour for all analyses

[1] Optional data where changes do not impact traffic operations but otherwise required

Crash Data (Required)

5 most recent years of intersection crash data	*Crash Severity*		
Crash Type	PDO	Injury Crash	Fatal Crash
Angle	0	0	0
Head-On	0	0	0
Rear End	0	0	0
Sideswipe - same	0	0	0
Sideswipe - opposite	0	0	0
Not Collision w/Motor Veh	0	0	0
TOTALS:	0	0	0

Description of Work / Justification for Waiver (Required): The Rock Quarry Road Widening project will widen the existing 2-lane Rock Quarry Road to a 4-lane median divided corridor from N Park Drive/Eagles Spring Drive to N Henry Boulevard/SR 1318/SR 42/US 23. Improvements will also include improved pedestrian accommodations along both sides of roadway. JUSTIFICATION FOR WAVIER: A restricted crossing U-turn (RCUT) is recommended versus the ICE Tool's preferred alternative of a Right-in/Right-out because of the need to accommodate the frequency of emergency vehicles accessing the VITAS Inpatient Facility.

REQUESTED BY: Daniel B Dobry Jr Date: Jan 16, 2018

Name: DANIEL B. DOBRY, JR, P.E, PTOE, AICP

Title: TRAFFIC ENGINEERING MANAGER

APPROVED BY: _____ Date: _____

Name: _____

Chief Engineer or (Approved Delegate)

MS4 Concept Report Summary

Attach the following checklist information to the Concept Report Template:

Is there a Project Level Exclusion that applies to this project: ☒ No ☐ Yes

If yes, please indicate which of the following exclusions apply:

- ☐ Roadways that are not owned or operated (maintained) by GDOT may not require post-construction BMPs. Coordinate with the appropriate local government or entity to determine stormwater management requirements.
- ☐ The project location is not within a designated MS4 area.
- ☐ Maintenance and safety improvement projects whereby the sites are not connected and disturbs less than one acre at each individual site. This includes projects such as repaving, shoulder building, fiber optic line installation, sign addition, and sound barrier installation.
- ☐ Projects that have their environmental documents approved or right-of-way plans submitted for approval on or before June 30th, 2012.
- ☐ Road projects that disturb less than 1 acre or for site development projects that add less than 5,000 ft^2 of impervious area.

Drainage Area Summary

	Pre-Development			Post-Development			Water Quality Volume (Cubic Feet)	Channel Protection Volume (Cubic Feet)	Required Detention Volume (Cubic Feet)
Outfall Area	Tc(min)	Weighted CN	Area (Acres)	Tc(min)	Weighted CN	Area (Acres)			
1	5	87	3.00	5	90	3.00	1255	13217	43587
2	9.7	79	4.71	9.7	85	4.71	3881	20664	68146
3	5	70	6.76	5	74	6.76	4234	17824	77473
4	23.6	75	8.34	23.6	78	8.34	5410	26157	73391
5	24.8	72	6.04	24.8	76	6.04	5104	17119	70441
6	17.2	75	4.86	17.2	82	4.86	4670	18385	65035
7	9.7	81	4.68	9.7	85	4.68	2500	20576	67854
8	11.3	76	6.42	11.3	79	6.42	2219	21506	81874
9	11.0	78	7.00	11.0	85	7.00	6429	28108	92694
10	8.7	88	10.38	8.7	88	10.38	1843	0	119934

BMP Selection and Feasibility Summary					
	Outfall Level Exclusion?			Is the BMP Feasible?	
	Y/N	Exclusion No.	BMP Selected	Y/N	Infeasibility Criteria No.
Outfall Area					
1	N		Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	
2	N		Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	Possible site size restriction
3	Y	3. Installation impacts a Wetland	Dry Detention Basin/Grass Channel or Wet Detention Pond		
4	N	Water quantity req. may be waived	Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	
5	N	Water quantity req. may be waived	Dry Detention Basin/Grass Channel or Wet Detention Pond	N	9. Site size
6	N	Water quantity req. may be waived	Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	
7	N		Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	
8	N		Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	
9	N		Dry Detention Basin/Grass Channel or Wet Detention Pond	Y	
10	Y	6. Negligible increase in impervious area			

MS4 ROW COSTS			
COST TOTALS VIA ARC CHART			
	RESIDENTIAL	**COMMERCIAL**	**INDUSTRIAL**
RIGHT-OF-WAY	$33,429	$843,616	$52,820
EASEMENT	$0	$0	$0
TOTALS	**$33,429**	**$843,616**	**$52,820**
MS4 ROW TOTAL		**$929,866**	

Flexible Pavement Design Analysis

PI Number	0015090	**County(s)**	Henry
Project Number	1518.00	**Design Name**	Rock Quarry Road Full Depth
Project Description	Rock Quarry Rd widening from Eagles Landing Pkwy to N Henry Blvd		

Traffic Data (AADTs are one-way)						**Miscellaneous Data**	
Initial Design Year	2024	**Initial AADT, VPD**	3,632	**24 Hour Truck %**	24.80	**Lanes in one direction**	2
Final Design Year	2044	**Final AADT, VPD**	6,657	**SU Truck %**	21.10	**Curb & Gutter/Barrier**	Yes
		Mean AADT, VPD	5,145	**MU Truck %**	3.70		

Design Data					
Lane Distribution Factor (%)	70.00	**Soil Support Value**	2.50	**Single Unit ESAL**	0.40
Terminal Serviceability Index	2.50	**Regional Factor**	1.60	**Multiple Unit ESAL**	1.50
		User Defined 18-KIP ESAL	0.00	**Calculated 18-KIP ESAL**	0.56
Non-Standard Value Comment					

Design Loading (Calculated 18-KIP ESAL)					
Mean AADT, VPD	**LDF (%)**	**Vehicle Type**	**Volume (%)**	**ESAL Factor**	**Daily ESAL**
5,145	70.00	Single Unit Truck	21.10	0.40	304
		Multi Unit Truck	3.70	1.50	200
				Total Daily ESALs	504
				Total Design Period ESALs	3,679,200

Proposed Flexible Full Depth Pavement Structure				
Course	**Material**	**Thickness (inches)**	**Structural Coefficient**	**Structural Value**
Course 1	12.5 mm Superpave	1.50	0.4400	0.66
Course 2	19 mm Superpave	3.00	0.4400	1.32
Course 3	25 mm Superpave	5.00	0.3000	1.50
Course 4	Graded Aggregate Base	12.00	0.1600	1.92

Required SN	5.47	**Proposed pavement is 1.20% Underdesigned**	**Proposed SN**	5.40

Design Remarks	Rock Quarry, 4 lanes, urban shoulder, 20' median

Prepared By 2/23/2017 10:05 AM

Robert Bishop, Transportation Engineer **Date**

Recommended By

Consultant Design Phase Leader **Date**

Approved By

State Pavement Engineer **Date**

Filename: Y:\1518.00 Rock Quarry Road\02-Engineering\Concept\Concept Report\Pavement Design\GDOT Pavement Design Tool v2.0.xlsm

GDOT Pavement Design Tool - Version 2.0

Kick Off Meeting Minutes- P.I. 0015090

Project & PI:	Rock Quarry Road from Eagles Landing Parkway to SR 42/SR 138, P.I. 0015090
Location:	Henry County SPLOST Office Conference Room, 112 Zack Hinton Pkwy, McDonough, GA
Moderator:	Roque Romero, Henry County
Design Firm:	Croy Engineering, LLC, Chris Rideout, Project Manager
Date:	8 September 2016
Time:	9:00 AM – 10:15 AM
Attendees:	David Webb (Croy), Chris Rideout (Croy), Krystal Stovall-Dixon (GDOT), Jason Mobley (GDOT), Michael Marget (GDOT), Chae H. Yi (Henry Co.), Roque Romero (Henry Co.)

- Project Description/Background: 2.9 miles of roadway widening, from the Eagles Landing to SR 42/138, Henry County

- Overview of Project

  - The project extends from Eagles Landing Parkway to SR 42/138
  - Current proposed typical section is 4-11 foot lanes, 20’ raised median, with a 10’ multi-use path on one side and 5’ sidewalk on the other
  - Design speed will be 45 mph.

- Project Baseline Schedule/Timeline

  - Henry County expected to provide Croy with an NTP on 9/12/2016.
  - Current schedule is a draft prepared by Croy. Jason will distribute amongst GDOT SME for comment
  - Initial Concept Team Meeting – Early November 2016
  - Public Information Open House (PIOH): January 2017
  - Concept Report Approval: March 2017
  - Environmental Document Approval: June 2018
  - Preliminary Plans Submission and Review (PFPR): November 2017

- Project Items

  - Hospital Drive intersection – Croy will confirm whether a traffic signal is warranted
  - Rum Creek is a potential mitigation site
  - Look at “R cuts” for left turn in access at some locations
  - Need to locate/create a project justification statement
  - Interconnectivity of signals?
  - Henry County to confirm the use of mast arms vs strain poles for the signals
  - County prefers illuminated street signs
  - Croy will follow Henry County MS4 guidelines
  - Henry County will handle utility coordination efforts
  - It is anticipated that Henry County will let the project
  - Croy will prepare an initial cost estimate, Construction and ROW, as soon as the concept has been better defined.

- Action Items

    - Croy will provide Jason a list of team partners with contact information for his records
    - Croy will prepare a preliminary concept for the initial concept team meeting
    - Croy survey will send property owner's list to Henry Co. for them to send out survey notification letters
    - Croy expected to begin survey 1-2 weeks after notification letters have been sent
    - Croy will begin concept development
    - Initial concept team meeting to be scheduled in November
    - ICTM agenda to be coordinated between Croy and GDOT

Croy Engineering, LLC
200 North Cobb Parkway
Building 400, Suite 413
Marietta, Georgia 30062

Phone: 770.971.5407
Fax: 770.971.0620

www.croyengineering.com

Rock Quarry Road (P.I. 0015090)

Traffic Operations Meeting – September 27, 2016 *(Meeting Notes)*

AGENDA

- Existing Traffic Operations
  - Major Congestion Points
  - Pedestrian Activity

    Majority of pedestrian activity occurs south of Carrington Ridge
- Crash History
  - GEARS

    GEARS Crash Records database will be use to complete safety analysis.
- Traffic Counts
  - Count Locations

    Assume typical peak periods for Turning Movement counts;

    (7AM – 9 AM; 4 PM – 6 PM)
  - Types of Count Data to be Collected
    - *12-Hr Turning Movement Counts (TMC)*
      1. *Red Oak Rd @ Rock Quarry Rd*
      2. *Hospital Dr @ Rock Quarry Rd*
      3. *Windsong Dr @ Rock Quarry Road*
    - *2-Hr AM/PM Peak Turning Movement Count (TMC)*
      1. *N Henry Blvd/SR 42/SR 138/US 23 @ Rock Quarry Rd*
      2. *Banks Rd @ Rock Quarry Rd*
      3. *North Park Dr @ Rock Quarry Rd*
    - *24-Hr Bi-directional/Classification on Rock Quarry Rd*
      1. *South of S. Lee Street*
      2. *South of Banks Road*
      3. *South of N. Park Trail*

- Signal Warrant Analysis
    - Intersections to Analysis for Signal
        - Banks Road @ Rock Quarry Road *(Signal already exists)*
        - Red Oak Road @ Rock Quarry Road
        - Hospital Drive @ Rock Quarry Road
        - *Windsong Dr @ Rock Quarry Road*
    - *Follow GDOT's process for completing Signal Warrant Analyses*.
- Traffic Forecasting Methodology
    - Travel Demand Model versus Historical Regression

      Use Henry County's Travel Demand Model to determine project growth rate in region.
- Future Land Use
    - Pending Developments in Region
    - Areas Susceptible to Development
    - *Review "Henry County In Motion"*
- Traffic Operations Analysis
    - *Assess adding northbound dual lefts at Rock Quarry Road and SR 42.*
    - Signal Timing Data Requests
        - *Henry County DOT can provide signal timing data for Rock Quarry Rd @ Eagles Landing Pkwy and Rock Quarry Rd @ Banks Rd/Carrington Ridge*
        - *GDOT will be contacted for signal timing data for Rock Quarry Rd @ SR 42*
        - *Signals are not currently interconnected. For future coordination considerations, Henry County would prefer wireless connections.*

- Transportation/Roadway Discussion
    - *Henry County: Future plans to extend Rock Quarry Road north of SR 42*
    - *Henry County DOT prefers K-value from 1990 Green Book*

- Closing
    - *Action Items*
        - *Schedule Traffic Counts*
        - *Complete crash records summary*
        - *Schedule meeting with GDOT's Office of Planning to discuss Traffic Forecasting Methodology*
        - *Coordinate with ARC for the latest Henry County Travel Demand Model data*
        - *Request signal timing data for traffic models*
        - *Review "Henry County In Motion" (CTP) for future land use/transportation/etc.*

Rock Quarry Road (P.I. 0015090)

Initial Concept Team Meeting – November 16, 2016

AGENDA

- The Project Justification -Ongoing
- Planning concept/modeling data/STIP project definition Unavailable
- Need for an Interchange Justification Report (IJR) or Interchange Modification Report (IMR). – IJR or IMR not required. No proposed interchange
- Safety concerns – truck traffic, sight distance issues at Banks
- Need for a formal or informal location inspection - TBD
- Alternatives considered to date – Widening to 4-11' lanes and 20' raised median, pedestrian and bicycle accommodations via a 10' multi-use path and 5' sidewalk.
- Preliminary design traffic– In process
- Accident data for the most recent three years for which complete data is available – utilizing GEARS Crash Records
- Location of potential roundabouts or traffic signals.
  - Banks Road @ Rock Quarry Road (Signal already exists)
  - Red Oak Road @ Rock Quarry Road
  - Hospital Drive @ Rock Quarry Road
  - Windsong Dr @ Rock Quarry Road
- Traffic Engineering Study – in process
- ITS opportunities - TBD
- ITS architecture - TBD
- Ultimate operating agency or other users of the ITS system – Henry County
- Maintenance issues with the ITS system - TBD
- Other GDOT offices, other state or local agencies that will be affected by the ITS system - TBD
- Staging and traffic control, including Traffic Management Plan – Widening will alternate sides of the existing roadway and 2 lanes of traffic will be maintained during construction. Existing culverts are expected to be extended outside of traffic.TMP will be required but expected to be classified non-significant
- Work zone safety and mobility requirements

- Traffic calming techniques to be implemented
  - 20’ median
  - Urban Shoulder
- Maintenance problems, including drainage and pavement problems – Unknown
- Proposed design criteria including design speed 45 mph majority (35 mph north of bridge?)
- Proposed type of access control – per Henry County
- District information on public contacts and concerns to date - None
- Evaluate the extent of public outreach efforts and coordination needed – PIOH at a minimum
- Coordination with FHWA, FTA, GRTA, State Road and Tollway Authority (SRTA), and other non-environmental Federal, state and local agencies and/or governments - FHWA
- Requirements for:
  - Mapping – Field survey on-going
  - Aerial photography – already flown, shown in concept
  - Tax plats with property owners names – In process
- Photographs or Video logs –In process
- Proximity to (< 200’ of existing crossing) and impacts to railroads and railroad right-of ways – Existing bridge recently constructed over railroad to accommodate widened section of Rock Quarry Road. Possible MS4 detention facility north of the Railroad tracks.
- Proximity to and impacts to airports n/a
- Existing structures and their condition
  - Existing bridge
  - 2 existing culverts
- Temporary access requirements for the removal of existing bridges and/or the construction of new bridges n/a
- Environmental concerns:
  - History – Historic impacts, if any will be evaluated
  - Potential for Archaeology? None expected, will be evaluated
  - Neighborhoods – Various subdivisions, a few property owners will be within close proximity to the widened roadway
  - Special interest groups Not expected
  - Context Sensitive Design-Additional modes of transportation accommodated
  - Cemeteries - None
  - Parks and recreation Park north of concrete plant

- Need for a Practical Alternatives Report (PAR) -TBD
- Wetlands and streams, open waters, buffers, floodplains 2 stream crossings, possible wetlands in stream areas
- Endangered species Not expected – full ecology
- Erosion and Sedimentation Control – 3 phase with staging
- Designated MS4 Area(s) In MS4 area, possible facilities shown on concept
- Air Quality – Air quality impacts will be studied
- Potential for noise impacts Noise impacts will be evaluated

- Possible permits required:
  - U. S. Army Corps of Engineers Section 404 Permit-probable
  - U. S. Army Corps of Engineers Section 408 Permit-not expected
  - Tennessee Valley Authority (TVA)-n/a
  - U. S. Coast Guard (USCG)-n/a
  - Stream Buffer Variance -possible
- Opportunities to accommodate other modes of transportation – pedestrian and bicycle
- Coordination with other GDOT and local projects - ongoing
- Existing right-of-way – varies 50’ to 100’
- General location, size of utilities, and the need to employ an Overhead/Subsurface Utility Engineering (SUE) investigation to be used for further concept development – SUE Level B will be completed
- Determine if the Public Interest Determination Policy and Procedure should be used for the Project - TBD
- Risk Assessment – SME’s
- Concurrence to proposed project schedule
  - Concept Approval – June 2017
  - Preliminary Plans Complete – December 2017
  - Right of Way Plans Complete – June 2018
  - Final Plans Complete – March 2019

Concept Team Meeting Minutes-P.I. 0015090

Project & PI:	Rock Quarry Road Widening, PI #0015090
Location:	GDOT Main Office; 600 W. Peachtree St NW, Atlanta, GA
Moderator:	Jason Mobley, Project Manager
Design Firm:	Croy Engineering, LLC, Chris Rideout, Project Manager
Date:	February 28th, 2017
Time:	1:30-2:30 pm
Attendees:	See attached sign in sheets

- Jason Mobley, GDOT Project Manager, called the meeting to order and led introductions
- Project Description: David Webb from Croy Engineering gave an overview of the project discussing the proposed layout, including the R-cuts for intersection control. Chris Rideout then began to go over the draft concept report.
- The Project Justification Statement was discussed. GDOT Planning stated that Croy Engineering could go ahead and resubmit the PJS with unapproved traffic numbers.
- Other projects in the area and funding were noted.
- Erik Rohde with GDOT Design noted that a Pavement Type Selection will be required because the project will replace most of the existing paving on the corridor.
- The Design and Structural section of the report was discussed, along with the proposed typical section.
- Lighting of the project was discussed. The city of Stockbridge and Henry County will discuss how/if the road will be lighted and decide if it should be included in the project.
- No Design Variances or Exceptions are anticipated with the project.
- The utilities along the corridor will be verified – including Clayton County Water Authority. Roque Romero with Henry County noted that Georgia Transmission needed to be added to the list of utility companies and that utility easements will be required for the project.
- Albert Shelby with GDOT OPD confirmed that a Public Interest Determination Policy and Procedure was not required for the project.
- Context sensitive solutions were discussed including noise walls.
- Michelle McIntosh with Croy Engineering discussed the environmental process and permits. A Categorical Exclusion is currently anticipated; however, that is a determination that will be made by FHWA after environmental studies have been conducted.
- Albert Shelby stated that if there was any public controversy surrounding the project then it could possibly be upgraded to an Environmental Assessment.

- The party responsible table will be completed by Croy along with the funding responsibilities.
- The preferred alternative and no build were discussed.
- Aimee Turner with Croy Engineering discussed the ongoing traffic analysis of the corridor, including potential signal/roundabout locations and verifying the applicability of R cuts at the remaining intersections of the corridor.
- Jason Mobley asked all of the present GDOT SMEs for any additional concerns on the project, none were noted that had not already been discussed.
- Jason Mobley then adjourned the meeting.

Summary of Stakeholder Meetings

To: Jason Mobley, Roque Romero-Muniz, Chris Rideout, David Webb, Michael Margut, Dan Dobry

CC: Project File

From: Michelle McIntosh

Date: February 9, 2017

Re: Widening of Rock Quarry Road, Henry County – P.I. #0015090

The project team has identified three (3) stakeholders along the proposed project corridor for the widening of Rock Quarry Road: Piedmont Henry (hospital), the Gardens of Eagles Landing Homeowners Association (HOA), and the Windsong Plantation Property Owners Association (POA). As such, a series of three (3) stakeholder meetings were conducted yesterday, February 8, 2017 with the identified stakeholders.

The primary purpose of the meetings was to coordinate the preliminary layouts with the stakeholders, discuss potential impacts to their respective facilities, and receive feedback from the stakeholders prior to proceeding to a Public Information Open House (PIOH). Henry County, Georgia Department of Transportation (GDOT), and Croy Engineering staff attended the meetings (see Attachment 1 – Sign-in Sheet).

At 3:30pm, the project representatives met with Steve Jordan, Director of Engineering for Piedmont Henry, at his office located at 950 Hospital Drive, Stockbridge, GA. It is not anticipated that the hospital will be directly impacted by project implementation; consequently, the primary purpose for the meeting was to discuss potential impacts regarding access to and from the hospital, particularly with regards to emergency response vehicles. Mr. Jordan was shown the draft conceptual layouts and the following items were discussed:

- Mr. Jordan stated that a traffic signal was really needed at Hospital Drive and Rock Quarry Road. The main entrance to the hospital is on Eagles Landing Parkway; however, the emergency entrance for ambulances and other vehicles is via Rock Quarry and Hospital Drive. Vehicles, including ambulances, tend to enter via the Rock Quarry Road entrance but exit via Eagle Landing or by taking a right onto Eagle Landing because it is too difficult to take a left onto Rock Quarry Road.
- Who owns Hospital Drive, the City or the County?
- Piedmont Henry is currently in the progress of developing their 5-year Strategic Plan. The draft plan includes a 5-story tower (1 story for emergency, 2 stories for parking,

and 3 stories for patient rooms), approximately 2 new medical buildings, a 500 space parking deck, a new access road from Rock Quarry Road located just south of the proposed detention pond between Windsong Drive and Eagle Walk. Michelle McIntosh will call Mr. Jordan in about 2 months to see if the 5-year Strategic Plan is available yet.

- The signal warrant analysis is currently in progress. Do emergency vehicles factor into the signal warrant analysis? Will the 5-Year Plan for Piedmont Henry affect the traffic analysis and the signal warrant analysis? [A subsequent conversation with Dan Dobry, Traffic Engineer for this project,
- Mr. Jordan was supportive of the project and stated that it was very much needed. Once the PIOH details are finalized, Michelle McIntosh will send PIOH flyers to Mr. Jordan who will post them and distribute them to staff members.

The meeting with Mr. Jordan adjourned at approximately 3:50pm.

The project representatives met with Mr. Arthur Dunbar, President of the Gardens of Eagles Landing HOA, at 4:30pm at the Henry County SPLOST Offices located at 112 North Zack Hinton Highway, McDonough, GA. Mr. Dunbar was shown the draft conceptual layouts and the following items were discussed:

- A concern was expressed regarding the encroachment of the proposed transportation facilities toward the houses that back up to Rock Quarry Road, the subdivision sign at the entrance, the subdivision wall located just north of Gardens Walk, and the vegetation located just south of Gardens Walk. Mr. Dunbar was assured that every effort was being made to avoid impacts to the wall and that construction easements would be temporary.
- Concerns were expressed regarding the proposed R-cut on Rock Quarry Road at the subdivision. The inability to make a left out of the sub-division will likely be unpopular with the homeowners and will be problematic for the 3 or 4 school buses that enter and exit the subdivision. It was explained that for safety reasons the R-cuts are in-line with the new GDOT policy. R-cuts are proposed throughout the Rock Quarry Road corridor as well as other proposed and recent improvement corridors in Henry County. Roque Romero-Muniz will coordinate with the Board of Education. The bus routes may need to be modified slightly and the right-in/right-outs can be modeled to accommodate the school buses.
- Concerns were expressed regarding potential impacts to the “swampy” area on the west side of Rock Quarry Road, across from the subdivision. Mr. Dunbar was advised that ecological studies are currently on-going. If the area is determined to be a wetland under the jurisdiction of the U.S. Army Corps of Engineers (USACE), any impacts to the wetland would be permitted and mitigated, if required, through the USACE and the project would be designed in accordance with all applicable environmental laws and regulations.
- Concerns were expressed regarding the proposed project’s potential impacts to the sub-division’s detention pond, which is old and having issues. Mr. Dunbar was assured that the road project would have no effects to the detention pond.

The meeting with Mr. Dunbar adjourned at approximately 5:00pm.

At 5:30pm, the project representatives met with three Board Members of the Windsong Plantation POA. The meeting was held at the Windsong Plantation Clubhouse, Stockbridge, GA. The Board Members were shown the draft conceptual layouts and the following items were discussed:

- The primary purpose of the proposed widening is alleviate congestion. The primary purpose of the median is to improve safety. The members concurred that congestion alleviation is needed because there are over 415 homes in the Community and in the morning it sometimes takes 5 to 10 minutes to get out of the sub-division via the Rock Quarry entrance/exit. Also, many travelers use the subdivision as a cut thru between Rock Quarry Road and Eagles Landing Parkway. The Board Members would like to see a traffic signal at Rock Quarry Road and Windsong Drive.
- The Board Members were very hopeful that the PIOH would be held at the Merle Manders Conference Center. Michelle McIntosh will contact Harland Smith of the GDOT, who is making the PIOH arrangements and see if this is feasible.
- Concerns were expressed regarding potential noise impacts and it was asked what mitigation measures are being considered. It was explained that noise studies have not yet been conducted. If it is determined that noise impacts will occur, a noise barrier analysis will be conducted. If the criteria for a barrier is met, then a noise wall would be proposed; however, some communities would prefer not to have the noise wall constructed.
- The Windsong Plantation sign at Rock Quarry Road was built to be movable in anticipation of the proposed roadway widening.
- What is the project schedule? We are currently in the concept phase. The design phase should take 1 to 2 years and the right-of-way acquisition phase should also take another 1 to 2 years, although the right-of-way funding has not been identified yet. Hopefully, construction will be in approximately 3 to 4 years.
- Coordination should also be conducted with the either David Grace or Kathy of the Eagle's Landing Community Association or Mike Reece with Century Management.

The meeting with the Windsong Plantation Board Members adjourned at approximately 6:10pm.

As asides in between the various stakeholder's meetings, the project team discussed the following items:

- Potential traffic signals should not be shown at the PIOH. Only show existing or already warranted signals.
- The GDOT is potentially moving the PIOH out from March 22, 2017 to April 13, 2017 to accommodate the makings of the signs. Who is responsible for the signs, GDOT or

the County? If the signs are made by the County, would we have to post-pone the PIOH? Signs must be up 10 days prior to the PIOH. [Jason Mobley will follow-up]

- The methodology for traffic has been approved. When is the next traffic milestone? [Croy will follow-up]

The meeting was adjourned at approximately 6:15pm.

Stakeholders Meetings
February 8, 2017
Widening of Rock Quarry Road, Henry County, P.I. #0015090

Sign-in Sheet

NAME	TITLE	AFFILIATION	EMAIL
JASON MOBLEY	PM	GDOT	jmobley@dot.ga.gov
Michelle McIntosh	Environmental	Croy	mmcintosh@croyengineering.com
DAVID WEBB	PE	Croy	dwebb@croyengineering.com
Steve JORDAN	Director Engineering	Piedmont Henry	steve.jordan@piedmont.org
Chris Rideout	PM	Croy	crideout@croyengineering.com
Arthur Dunbar	President, HOA	The Gardens of Eagle Landing	arthur_dunbar1@yahoo.com
CHAE H. YI		Henry County	
Greg Davis		Windsong Plantation	davis7512@bellsouth.net
Ezekiel Pettway	President-WPPOA	Windsong Plantation	ETPettway@yahoo.com
HAROLD THIBODEAUX	WPPOA BOARD MEMBER	Windsong Plantation	THIBODEAUXV@AOL.COM
Roque Romero-Muniz	SPLOST Director	Henry County	rrmuniz@co.henry.ga.us

Public Involvement Log
Widening and Reconstruction of Rock Quarry Road, Henry County
GDOT Project #0015090

Tuesday, March 14, 2017
I voice-mail was left for me about 9:15am from Mr. Lou Goglia, who is a home owner in the Gardens at Eagle's Landing subdivision. Mr. Goglia owns the property that backs up to Rock Quarry Road with the swimming pool in the back yard. I returned his call at approximately 9:45am.

Mr. Goglia expressed concerns regarding the proposed widening, as listed below:

- Does not believe the proposed widening will alleviate congestion. A huge part of the problem is the truck traffic. The commercial area south of Banks Street is also a part of the congestion problem.
- He and his wife spend a lot of time in his back yard and his wife has Chronic Obstructive Pulmonary Disease (COPD). Also, his bedroom is located approximately 98 feet from the centerline. He feels that a wall is needed to mitigate emissions and noise.

Mr. Goglia was assured that I would prepare this record of phone conversation for the project records and was encouraged to attend the upcoming Public Information Open House (PIOH) on April 13, 2017. I advised him that it would be a good opportunity to learn more about the project and to make comments during the official public comment period. Mr. Goglia assured me that he and his wife would attend. He also provided me with his e-mail address and I subsequently forwarded him the flyer with specific PIOH information.

Tuesday, March 14, 2017
I received a phone call from Mr. Ezekial Pettway at approximately 11:00am. Mr. Pettway is the President of the Windsong Plantation Property Owners Association (WPPOA) and has been identified as one of the Stakeholders along the project corridor.

Mr. Pettway phoned as a follow-up from our Stakeholders Meeting on February 8, 2017. He was wondering when and where the PIOH was scheduled so that he could disseminate the information to the property owners in the Windsong Plantation sub-division. I provided him the requested information and forwarded him an electronic copy of the PIOH flyer. I advised him that the flyer had not been approved yet but that I expected to obtain approval on March 29th and that I would email him a stack of flyers as soon as I received approval.

Wednesday, March 15, 2017

I was courtesy copied on an email from Ms. Brenda Bloomer to Jason Mobley, PM. Ms. Bloomer operates the hospice located at 931 Rock Quarry Road. I responded to Ms. Bloomer on Thursday, March 16th, providing a response to her environmental questions and Jason Mobley responded to Ms. Bloomer Friday, March 17th regarding the construction schedule. The e-mails can be found in Appendix 1 – Correspondence.

Friday, March 17, and Monday, March 20, 2017

I received an email from Michael Margut, the assigned NEPA Analyst at the GDOT Office of Environmental Services (OES). He had received a phone call from a representative for the City of Stockbridge in response to the early coordination letters that had been sent. Mr. Margut was provided contact information for two community leaders in the Rock Quarry Road project area and emailed the information to me. The e-mail can be found in Appendix 1 – Correspondence.

In response to the information provided, I attempted to contact both of the identified community leaders on Monday March 20th. No answer or voice mail was received in an attempt to contact Mr. Alphonso Thomas. Since I also have his e-mail address, I followed up with an email to him with the PIOH Flyer attached. I offered to send hard copies for him to distribute to the community if he would let me know how many to send. The email can be found in Appendix 1 – Correspondence.

No answer was received in an attempt to call the Reverend Doctor Jacquelyn Johnson of Trinity Church. However, I left a voice mail letting her know about the PIOH and asking her to call me on my cell phone about the PIOH.

Tuesday, March 21, 2017

Today I was on Rock Quarry Road doing some environmental field surveys and I had a conversation with one of the property owners. I spoke with Mr. Chuck Evans, owner of Evans Sand & Gravel, located on the east side of Rock Quarry Road directly across from Nova Circle. Mr. Evans discussed the following concerns:

- Based on the current layouts, Mr. Evans security fence and a portion of his structure would be impacted. Mr. Evans wants to make sure that the security fence is replaced.
- Mr. Evans obtains sand and gravel from the quarry located on the west side of Rock Quarry Road, just north of the Southern Railroad and across from Mahers Quarry Road. Because the quarry is located south of his business, he is concerned about the proposed inability to turn left. The U-turn at the R-cut does not appear to be able to accommodate the dump trucks and tractor trailer trucks.
- Mr. Evans sells the gravel and sand which is loaded and taken away by tractor trailers and dump trucks. Access to and from his business for these large vehicles must be maintained.

Wednesday, March 22, 2017

While in the field on Tuesday, March 21st, I received a phone call, voice mail, and e-mail from various GDOT employees letting me know that there was a typo in the flyer. The typo has since been corrected. This morning a corrected flyer was sent to 3 individuals: Ezekial Pettway, Brenda Bloomer, and Alphonso Thomas. The erroneous flyer had previously been sent to them and so I sent them the revised flyer and let them know that time had been corrected. The updated e-mail chains can be found in Appendix 1 – Correspondence.

GDOT Office of Environmental Services | PIOH Summary of Comments

PI#(s): 0015090, County: Henry County

GDOT NEPA Planner: Michael Margut **Date Submitted:** 5/4/2017
Consultant Preparer (if applicable): Michelle McIntosh, Croy Engineering, LLC
GDOT Project Manager: Jason Mobley

Basic Meeting and Response Letter Info	
Meeting Date: 4/13/2017	Number of Attendees: 64
End of Comment Period: 4/24/2017	

Forms at the Meeting	*Forms or Letters Mailed to OES or OPD*	*Court Reporter Statements*	*Comments from OES's Website*
14	7	4	2*

*A commentor provided comments by 2 venues. The comments were combined for a total of 26 comments.

Disposition of Comments:

No. Opposed	*No. In Support*	*No. Uncommitted*	*Conditional*
0	7	7	12

Major Concerns:
The primary concerns indicated were with regard to the proposal of a raised median and the proposal for R-cuts that will allow for right-out turning movements only and will require u-turns. Other concerns included requests for traffic signals and environmental concerns relating to air and noise impacts.

Public Officials:
Ms. Dana Lemon, Transportation Board Member; Captain Henry Bratton, Henry County Police Department; Mayor Pro-Tem Anthony S. Ford, City of Stockbridge

Media:
Media representatives were not identified at the open house.

Comment Responses:
Responses to comments received will be provided by the project sponsor, Henry County.

Please find attached a PDF of all comments and the public official sign in sheet (or a link to the PDF) and a Word document of the draft response letter.

Cc (by email): Jason Mobley, Project Manager,
Chris Rideout, Croy Engineering, Project Designer
Wesley Brock, Assistant ROW Administrator
Paul DeNard, Traffic Operations Manager
Matthew Fowler, Assistant Office Head of Planning
Michael Margut, Office of Environmental Services
Harland Smith, District 3
Roque Romero-Muniz, Henry County
PDF to Project Documents; Hardcopy to General Files

SPLOST Office
112 S. Zack Hinton Pkwy.
McDonough, GA 30253
Phone: 770.288.7319
Fax: 770.288.7354
www.co.henry.ga.us

SPLOST

Henry County
Board of Commissioners
140 Henry Pkwy.
McDonough, GA 30253
Phone: 770.288.6000
Fax: 770.288.6026

June 19, 2017

Dan Abrams
Aume94@gmail.com

RE: Response to Comments Received from Public Information Open House
Rock Quarry Road Widening, Henry County
GDOT Project Identification #0015090

Dear Mr. Abrams:

Thank you for your comments concerning the proposed Rock Quarry Road Widening. We appreciate your participation and all of the input that was received as a result of the April 13, 2017 Public Information Open House (PIOH). Every comment received, including verbal comments provided to the court reporter and comments submitted online, will be made part of the project's official record.

A total of 64 people attended the PIOH. Of the 26 respondents who formally commented, 7 were in support of the project, 0 were opposed, 7 were uncommitted, and 12 expressed conditional support.

The attendees of the open house and those sending in comments within the comment period raised the following important questions and concerns. Henry County has prepared this one response letter that addresses all comments received so that everyone can be aware of the concerns raised and the responses given. Please find the comments summarized below (in *italics*) followed by our response.

- *Commenters expressed disappointment that a traffic signal is not currently planned for the intersections of Rock Quarry Road with Hospital Drive, Windsong Drive, Red Oak Road, Ashley Woods Apartments, or various business entrances located in the area of Nova Circle and Railroad Street.*

  Response: At this time, a traffic signal is not proposed at these intersections. A Traffic Engineering Study, which measures traffic volumes, pedestrian movements, and the physical characteristics of the roadway, is currently underway. It is undetermined, at this time, which intersections will meet the requirements for signalization.

- *Commenters expressed annoyance with R-cuts and U-turns, which they felt negatively impacted their subdivisions and/or businesses. One commenter asked where the R-cuts are planned along the corridor.*

  Response: The design shown at the PIOH reduces the opportunity for conflict and promotes efficient operations throughout the project corridor. A Restricted Crossing U-Turn (R-cut) intersection would reroute side-street left turn movements to the nearby U-turn. The separation of turning vehicles from through traffic would reduce delay, congestion, and the opportunity for crashes. U-turns will be designed to accommodate turning maneuvers for large trucks and school buses.

  As shown at the PIOH, R-cut intersections are proposed at Windsong Drive, Garden Walk, the hospice, Stonegate at Eagles Landing Apartments, Reeves Parkway, the concrete plant just north of Reeves Parkway, South Lee Street, and Nova Circle. R-cuts would be a more effective method of traffic control than a signal at these locations. Some of the benefits that R-cut intersections would provide to the traveling public include:

  - Drivers will only have to focus on traffic coming from one direction at a time.
  - Nationally, R-cuts have decreased fatal crashes by 70% and injury crashes by 42%.
  - Provides access to local businesses and commercial areas because the U-turns accommodate all movements.

- *A commenter from Windsong Plantation expressed concerns that the proposed R-cut (right out only) will affect access to the hospital from their sub-division.*

  Response: The R-cut at Windsong Drive will require drivers who are going to the hospital to take a right onto Rock Quarry Road, drive north approximately 1,200 feet, and make a U-turn to go south on Rock Quarry Road toward the hospital. Because the driver would not have to wait for a simultaneous break in both northbound and southbound traffic, the time difference is expected to be minimal and the opportunity for conflict is expected to decrease.

- *Commenters expressed annoyance with the proposed raised median.*

  Response: The design shown at the PIOH enables efficient operations throughout the project corridor and reduces the opportunity for accidents. It is GDOT policy to provide raised medians on multi-lane roadways with high turning volumes and an average daily traffic (ADT) of 24,000 vehicles for the design year. The projected traffic volumes for Rock Quarry Road indicate an ADT of over 30,000, well above the 24,000 threshold. The provision of raised medians on roadways such as Rock Quarry Road would reduce turning conflicts and crashes by up to 55 percent. The addition of the median would concentrate turning and crossing maneuvers at a limited number of intersections and would provide a physical barrier between opposing directions of travel. The provision of

a raised median would also provide a mid-way refuge for pedestrians and bicyclists crossing the roadway so that they would only have to focus on traffic coming from one direction at a time.

- *Commenters requested aesthetic improvements along the proposed corridor. Requests included median landscaping, lighting improvements, mast arm poles rather than standard signal poles, and aesthetic noise walls, if required.*

  At this time, the only proposed landscaping features would be the grassed strip between the edge of roadway gutter and the sidewalk/multi-use path. Since the project is still very early in the plan development process, this is subject to change as more coordination with Henry County, the City of Stockbridge, and GDOT takes place.

  Lighting improvements are not currently proposed as part of the improvements on Rock Quarry Road. Since the project is still very early in the plan development process, this is also subject to change as more coordination with Henry County, the City of Stockbridge, and GDOT takes place.

  It has not yet been determined whether or not noise walls would be incorporated into the proposed project. Therefore, the type of noise wall, if any, is still unknown. Since this comment was received at the PIOH, it will be considered at the appropriate stage of plan development.

- *Since the Rock Quarry Road Corridor and the SR 42 widening project both terminate at SR 138/North Henry Boulevard, one commenter requested that the scope of the project be extended to include intersection and sidewalk improvements on SR 138/North Henry Boulevard to accommodate the additional traffic from the proposed Rock Quarry Road widening and the proposed SR 42 widening.*

  Response: The purpose of the proposed project is to improve the capacity and operations of Rock Quarry Road. Although the proposed project would upgrade the existing signal at SR 138/North Henry Boulevard, there are no improvements proposed along SR 138/North Henry Boulevard as part of this project and there are currently no projects programmed by Henry County, the City of Stockbridge, or GDOT to improve that corridor. If you would like to recommend a project for programming, you may contact the Henry County and/or City of Stockbridge Departments of Planning.

- *Commenter requested that the southern terminus of the project be extended south to include improvements at Rock Quarry Road intersection with Eagles Spring Drive/North Park Court.*

  Response: The purpose of the proposed project is to improve the capacity and operations of Rock Quarry Road from the terminus of the existing multi-lane, divided section approximately 500 feet north of Eagles Spring Drive/North Park Court to SR 138/North

Henry Boulevard to provide a continuous, multi-lane, divided corridor from Eagles Landing Parkway to SR 138/North Henry Boulevard. Any improvements to the existing multi-lane, divided section of Rock Quarry Road would need to be programmed as a different project. If you would like to recommend a project for programming, you may contact the Henry County and/or City of Stockbridge Departments of Planning.

- *While some commenters requested crosswalks in general along the corridor, other commenters requested crosswalks specifically in the areas of the Georgia Power easement to provide access to the Reeves Creek Trail and in the area of Ashley Woods Apartments.*

  Response: Crosswalks consistent with GDOT and Americans with Disability Act (ADA) requirements will be provided at all intersections with existing or proposed traffic signals along the corridor. Currently, there are existing traffic signals at Banks Road and SR 138/North Henry Boulevard to provide for pedestrian crossings. In order to provide a pedestrian crossing in the area of the Georgia Power easement or Ashley Woods Apartments, a mid-block pedestrian signal would have to be provided that stops all vehicles in both directions. According to the Federal Highway Administration's Manual on Uniform Traffic Control Devices, approximately 20 pedestrians would need to cross Rock Quarry Road at these locations to warrant a mid-block pedestrian signal. Considering the projected pedestrian counts do not support this need, mid-block pedestrian signals are not proposed as part of the Rock Quarry Road widening project.

- *Commenters requested that the scope of the project be extended to include connectivity between the proposed sidewalks/multi-use trail on Rock Quarry Road and the Reeves Creek Trail (along the existing Georgia Power Easement) and parking for Reeves Creek Trail off of Rock Quarry Road.*

  Response: The purpose of the proposed project is to improve the capacity and operations of Rock Quarry Road. There are no improvements proposed to improve access to the Reeves Creek Trail as part of this project. Connectivity with the Reeves Creek Trail would require extending the multi-use trail approximately 650 feet east to Rock Quarry Road. Any such improvements would need to be programmed as a separate project through coordination between Henry County and the City of Stockbridge. In accordance with GDOT's Complete Streets policies, the currently programmed project is being designed to ensure that facilities can be added when a future need becomes evident.

- *Commenters with homes in the Gardens of Eagles Landing subdivision that back up to Rock Quarry Road requested a noise wall to reduce noise and air impacts, as well as to improve privacy affected by the proposed, extended edge-of-pavement.*

  Response: Air Quality and Noise Impact Studies have not yet been completed for this project. If noise impacts are identified, a Noise Wall Analysis will be conducted to consider the feasibility of mitigation measures, such as noise walls.

- *Commenters requested copies of various environmental documents for the proposed project, including the Environmental Assessment, the Traffic Analysis, the Air Quality Study, and the Noise Impact Study.*

  Response: The requested environmental studies are on-going at this time. Commenters requesting to see the studies will be provided copies once the studies have been completed and approved by the appropriate agencies. The requests have been added to the Environmental Commitments Table for the project and will be provided prior to the right-of-way acquisition phase of the project.

- *Will the wall at the Gardens at Eagles Landing sub-division be affected by the project?*

  Response: At this time, the project is still in the conceptual phase of the plan development process and it is uncertain as to whether or not the wall at Gardens at Eagles Landing sub-division will be affected. However, the design team will make every effort to avoid any impacts to the wall. As the project progresses into the final design and more specific design details become available, we will be able to determine what effects, if any, project implementation will have on the wall.

- *Commenter requested that businesses in the area be notified prior to construction and informed how construction will affect access to and from their business.*

  Response: Property owners along the corridor, particularly those whose driveways would be affected by construction, are normally made aware of the construction schedule during the right-of-way and easement acquisition stage of the project. Construction of the proposed project may create inconveniences to motorists, but construction activities will be conducted in a manner that would maintain access and minimize conflict with traffic.

- *One commenter requested that the speed limit be reduced along the project corridor. Another commenter requested that the speed limit be reduced specifically in the area of the new senior living facility development.*

  Response: Speed limit restrictions in Henry County are determined by the Henry County Commissioner of Roads and Revenues. Requests for speed limit modifications should be made with that office.

Again, thank you for taking the time to participate and for your comments. Community input is essential to these projects. Should you have further questions, comments or concerns, please call the Project Manager for Henry County, Chris Rideout, at 770-971-5407 or the Environmental Analyst, Michelle McIntosh, at the same telephone number.

Sincerely,

Roque Romero

Roque Romero, P.E.
SPLOST Transportation Project Director

CC: Jason Mobley, GDOT Project Manager (via email)
Michael Margut, GDOT Environmental Analyst (via email)
PDF for Project File

RR/mm

CROY ENGINEERING Engineers Planners Surveyors

Summary of Level of Analysis Meeting with FHWA

To: Jason Mobley, Roque Romero-Muniz, Chris Rideout, Keisha Jackson, Krystal Stovall-Dixon, Chae Yi
CC: Project File
From: Michelle McIntosh
Date: August 7, 2017
Re: Widening of Rock Quarry Road, Henry County – P.I. #0015090

A meeting was held on Thursday, August 3, 2017 at 10:00am at the Georgia Department of Transportation General Office. The meeting was staffed by Chetna Dixon, Federal Highway Administration; Krystal Stovall-Dixon, PE, GDOT/Office of Program Delivery; Chae Yi, Henry County; Roque Romero-Muniz, Henry County; Chris Rideout, PE, Croy Engineering; Keisha Jackson, NEPA Specialist, Atkins; and Michelle McIntosh, NEPA Specialist, Croy Engineering.

The primary purpose of the meeting was to discuss the level of analysis (LOA) under the National Environmental Policy Act (NEPA) for the proposed widening and reconstruction of Rock Quarry Road. Handout materials including the draft project description, the draft need and purpose, the project location map, a summary of identified environmental resources and anticipated impacts, and the Summary of Comments Received at the PIOH were provided to Ms. Dixon prior to the meeting.

Led by Chris Rideout, the meeting began with an overview of the project's conceptual layout and proposed typical section. Michelle McIntosh then provided an overview of the environmental studies to date, all resources identified in the general project area, the anticipated impacts to the resources, the public involvement that has occurred to date, and public concerns that had been raised to date.

At that point, a general discussion was held regarding the required LOA for the project. The project team proposed that a Categorical Exclusion be prepared since anticipated environmental impacts are minimal. While agreeing that the team had done a good job minimizing environmental impacts to the greatest extent possible, Ms. Dixon was somewhat concerned about a Categorical Exclusion because widening projects are not specifically listed in 23 CFR 771.117(c) and due to concerns she had regarding the level of controversy.

Ms. Dixon stated that a written request should be provided to the FHWA requesting a specific level of documentation with respect to 23 CFR 771.117. It was agreed that the letter should be provided no later than August 11, 2017; however, Ms. Dixon would not be available for review the week of August 18th.

FOLLOW-UP INFORMATION AS OF AUGUST 10, 2017:

After the meeting with FHWA, while the above noted minutes were in review, the drafting of the written request for a Categorical Exclusion was begun. However, prior to completion, Ms. Dixon contacted Ms. Jackson via telephone stating that we should move forward with a Categorical Exclusion for this project. The record of phone conversation is attached.

Michelle McIntosh

From: Jackson, Keisha L <Keisha.Jackson@atkinsglobal.com>
Sent: Thursday, August 10, 2017 9:59 AM
To: Michelle McIntosh
Cc: Benton-Hooks, Carla; Mobley, Jason; Stovall-Dixon, Krystal E.
Subject: 0015090, Henry County| CE Justification Statement

Hello: Chetna just called to inform me that we are to move forward with a CE submittal for this project and the no justification statement is needed. She indicated that we should submit whatever we feel is necessary. Chetna will follow up with Carla as well.

Michelle: I think we should submit a CE with an ICE discussion.

Keisha Jackson
Sr. NEPA Planner II

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Consider the environment. Please don't print this e-mail unless you really need to.

Rakeem Jackson

From: Michelle McIntosh
Sent: Friday, November 17, 2017 10:43 AM
To: Rakeem Jackson
Subject: FW: Rock Quarry Road, Henry County, P.I. #0015090 _Level of NEPA Documentation Email From FHWA

Hello! Here is part 2 of the saga.

From: Benton-Hooks, Carla [mailto:cbenton-hooks@dot.ga.gov]
Sent: Thursday, September 28, 2017 8:43 AM
To: Mobley, Jason <jmobley@dot.ga.gov>; Pomfret, Jim <jpomfret@dot.ga.gov>; 'Jackson, Keisha L' <Keisha.Jackson@atkinsglobal.com>
Cc: Chris Rideout <crideout@croyengineering.com>; Michelle McIntosh <mmcintosh@croyengineering.com>; Rocky Romero (rromero@co.henry.ga.us) <rromero@co.henry.ga.us>
Subject: FW: Rock Quarry Road, Henry County, P.I. #0015090 _Level of NEPA Documentation Email From FHWA

FYI

Carla Benton-Hooks
GDOT Office of Environmental Services
404-631-1415
Cbenton-hooks@dot.ga.gov

From: Dixon, Chetna (FHWA) [mailto:Chetna.Dixon@dot.gov]
Sent: Thursday, September 28, 2017 8:13 AM
To: Benton-Hooks, Carla
Cc: Dixon, Chetna (FHWA)
Subject: RE: Rock Quarry Road, Henry County, P.I. #0015090--Project Overview Information

Good Morning Carla,

Thank you for submitting the Summary of Environmental Findings for the above referenced project. It appears the proposed project could be cleared with a CE. An August 2, 2017 Overview of the Environmental Process to Date states, a commitment to one more stakeholder meeting with the Gardens at Eagles Landing Home Owner's Association and subdivision after the air and noise studies have been completed. However, we are not prepared to make a final decision at this time on the level of NEPA document for the above referenced project until after public involvement (PI) activities are completed on the project. We can revisit the level of NEPA document after PI activities are completed on the project. Please advise if you have any comments or questions.

Thanks,

Chetna P. Dixon | FHWA GA Division
Environmental Coordinator

☎:: 404.562.3655 office
✉:: 61 Forsyth Street, Ste 17T100; Atlanta, GA 30303
✉:: Chetna.Dixon@dot.gov

Please consider the environment before printing this e-mail

From: Jackson, Keisha L [mailto:Keisha.Jackson@atkinsglobal.com]
Sent: Wednesday, August 02, 2017 12:04 PM
To: Dixon, Chetna (FHWA) <Chetna.Dixon@dot.gov>
Cc: cbenton-hooks dot.ga.gov <cbenton-hooks@dot.ga.gov>; Michelle McIntosh <mmcintosh@croyengineering.com>
Subject: Rock Quarry Road, Henry County, P.I. #0015090--Project Overview Information

Good morning, Chetna.

Attached are several documents that should help introduce you to the subject project. There is a brief overview, the draft need and purpose statement and draft minutes of the 7/27/2017 HOA meeting, the summary of comments from the April 12, 2017 PIOH, and the Rock Quarry Road project. Unfortunately, there is no federal project id number for this project in the information available to OES.

Keisha Jackson
Sr. NEPA Planner II

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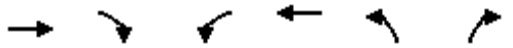
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Roadway fatalities in Georgia are up 33% in two years. That's an average of four deaths every single day! Many of these deaths are preventable and related to driver behavior: distracted or impaired driving, driving too fast for conditions,

and/or failure to wear a seatbelt. Pledge to **DRIVE ALERT ARRIVE ALIVE**. Buckle up – Stay off the phone and mobile devices – Drive alert. Visit www.dot.ga.gov/DAAA. #ArriveAliveGA

APPENDIX D: Synchro and HCS Analysis, Signal Timings



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	491	302	380	832	356	269
Future Volume (veh/h)	491	302	380	832	356	269
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	534	328	413	904	387	292
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	897	400	465	1753	424	377
Arrive On Green	0.31	0.31	0.20	0.56	0.29	0.29
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	534	328	413	904	387	292
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	15.4	23.2	17.2	17.9	25.6	20.6
Cycle Q Clear(g_c), s	15.4	23.2	17.2	17.9	25.6	20.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	897	400	465	1753	424	377
V/C Ratio(X)	0.60	0.82	0.89	0.52	0.91	0.77
Avail Cap(c_a), veh/h	897	400	529	1753	465	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	32.2	19.2	13.4	34.2	32.4
Incr Delay (d2), s/veh	2.9	16.9	15.5	1.1	21.9	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	8.6	7.4	5.7	10.8	14.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.4	49.0	34.6	14.4	56.1	41.4
LnGrp LOS	C	D	C	B	E	D
Approach Vol, veh/h	862			1317	679	
Approach Delay, s/veh	38.7			20.8	49.8	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		63.8		36.2	25.9	37.9
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		19.9		27.6	19.2	25.2
Green Ext Time (p_c), s		13.3		1.5	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	666	183	348	1085	143	324
Future Volume (veh/h)	666	183	348	1085	143	324
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	701	193	366	1142	151	341
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1376	736	448	1904	394	350
Arrive On Green	0.15	0.15	0.12	0.65	0.22	0.22
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	701	193	366	1142	151	341
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	21.7	10.7	10.1	22.4	7.2	21.4
Cycle Q Clear(g_c), s	21.7	10.7	10.1	22.4	7.2	21.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1376	736	448	1904	394	350
V/C Ratio(X)	0.51	0.26	0.82	0.60	0.38	0.97
Avail Cap(c_a), veh/h	1376	736	582	1904	394	350
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	27.2	16.2	10.1	33.2	38.7
Incr Delay (d2), s/veh	1.3	0.8	5.4	1.4	0.9	41.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	4.6	4.0	6.2	3.1	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.2	28.1	21.5	11.5	34.0	79.6
LnGrp LOS	C	C	C	B	C	E
Approach Vol, veh/h	894			1508	492	
Approach Delay, s/veh	32.1			13.9	65.6	
Approach LOS	C			B	E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	71.0		29.0	18.5	52.5
Change Period (Y+Rc), s	6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s	64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s	24.4		23.4	12.1	23.7
Green Ext Time (p_c), s	24.0		0.0	0.4	8.0

Intersection Summary	
HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	845	7	7	1233	8	2
Future Volume (veh/h)	845	7	7	1233	8	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	862	7	7	1258	8	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2602	21	622	2559	22	19
Arrive On Green	1.00	1.00	1.00	1.00	0.01	0.01
Sat Flow, veh/h	3089	24	637	3040	1781	1585
Grp Volume(v), veh/h	424	445	7	1258	8	2
Grp Sat Flow(s),veh/h/ln	1481	1555	637	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.4	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.4	0.1
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1280	1343	622	2559	22	19
V/C Ratio(X)	0.33	0.33	0.01	0.49	0.37	0.10
Avail Cap(c_a), veh/h	1280	1343	622	2559	125	111
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.80	0.80	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	49.0	48.9
Incr Delay (d2), s/veh	0.6	0.6	0.0	0.5	10.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.2	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.6	0.6	0.0	0.5	59.2	51.2
LnGrp LOS	A	A	A	A	E	D
Approach Vol, veh/h	869			1265	10	
Approach Delay, s/veh	0.6			0.5	57.6	
Approach LOS	A			A	E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	92.8		7.2		92.8
Change Period (Y+Rc), s	6.4		6.0		6.4
Max Green Setting (Gmax), s	80.6		7.0		80.6
Max Q Clear Time (g_c+I1), s	2.0		2.4		2.0
Green Ext Time (p_c), s	31.6		0.0		15.4

Intersection Summary		
HCM 6th Ctrl Delay	0.8	
HCM 6th LOS	A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	614	64	15	1068	170	58	27	47	229	5	112
Future Volume (veh/h)	157	614	64	15	1068	170	58	27	47	229	5	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	640	67	16	1112	177	60	28	49	239	5	117
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	191	1601	167	410	1168	185	219	107	153	316	5	126
Arrive On Green	0.07	0.59	0.59	0.15	0.15	0.15	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1570	2732	286	741	2561	406	605	387	553	929	19	455
Grp Volume(v), veh/h	164	350	357	16	642	647	137	0	0	361	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1523	741	1481	1486	1545	0	0	1403	0	0
Q Serve(g_s), s	5.3	12.6	12.7	1.8	43.0	43.2	0.0	0.0	0.0	18.4	0.0	0.0
Cycle Q Clear(g_c), s	5.3	12.6	12.7	1.8	43.0	43.2	6.7	0.0	0.0	25.1	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.27	0.44		0.36	0.66		0.32
Lane Grp Cap(c), veh/h	191	876	892	410	675	678	478	0	0	447	0	0
V/C Ratio(X)	0.86	0.40	0.40	0.04	0.95	0.95	0.29	0.00	0.00	0.81	0.00	0.00
Avail Cap(c_a), veh/h	191	876	892	410	675	678	506	0	0	474	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.90	0.90	0.90	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.8	11.2	11.2	23.9	41.4	41.5	28.5	0.0	0.0	35.3	0.0	0.0
Incr Delay (d2), s/veh	26.0	1.1	1.1	0.2	22.7	23.5	0.3	0.0	0.0	9.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	4.1	4.2	0.3	21.2	21.5	2.7	0.0	0.0	9.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.8	12.3	12.3	24.1	64.1	64.9	28.9	0.0	0.0	44.8	0.0	0.0
LnGrp LOS	D	B	B	C	E	E	C	A	A	D	A	A
Approach Vol, veh/h		871			1305			137			361	
Approach Delay, s/veh		19.2			64.0			28.9			44.8	
Approach LOS		B			E			C			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.0	52.7		34.3		65.7		34.3				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	7.0	43.7		29.5		56.7		29.5				
Max Q Clear Time (g_c+I1), s	7.3	45.2		27.1		14.7		8.7				
Green Ext Time (p_c), s	0.0	0.0		0.5		10.4		0.8				

Intersection Summary		
HCM 6th Ctrl Delay	45.0	
HCM 6th LOS	D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	702	90	154	1238	6	189	13	157	22	38	16
Future Volume (veh/h)	4	702	90	154	1238	6	189	13	157	22	38	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	739	95	162	1303	6	199	14	165	23	40	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	180	1289	166	375	1705	8	210	10	377	46	69	19
Arrive On Green	0.01	0.50	0.50	0.06	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2590	333	1753	3053	14	588	41	1585	0	290	78
Grp Volume(v), veh/h	4	414	420	162	638	671	213	0	165	80	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1470	1753	1495	1571	630	0	1585	369	0	0
Q Serve(g_s), s	0.1	20.0	20.1	4.3	32.9	32.9	0.0	0.0	8.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	20.0	20.1	4.3	32.9	32.9	23.8	0.0	8.9	23.8	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.01	0.93		1.00	0.29		0.21
Lane Grp Cap(c), veh/h	180	723	731	375	835	878	220	0	377	134	0	0
V/C Ratio(X)	0.02	0.57	0.57	0.43	0.76	0.76	0.97	0.00	0.44	0.60	0.00	0.00
Avail Cap(c_a), veh/h	283	723	731	440	835	878	220	0	377	134	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.9	17.7	17.7	12.9	17.0	17.0	41.6	0.0	32.4	32.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.3	3.3	0.1	0.6	0.6	52.6	0.0	1.7	10.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.7	6.8	1.5	10.3	10.9	8.5	0.0	3.5	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	20.9	20.9	13.0	17.6	17.6	94.2	0.0	34.1	42.8	0.0	0.0
LnGrp LOS	B	C	C	B	B	B	F	A	C	D	A	A
Approach Vol, veh/h		838			1471			378			80	
Approach Delay, s/veh		20.9			17.1			68.0			42.8	
Approach LOS		C			B			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	62.6		31.2	12.3	56.5		31.2				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	34.9		25.8	6.3	22.1		25.8				
Green Ext Time (p_c), s	0.0	11.6		0.0	0.1	9.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		25.9
HCM 6th LOS		C

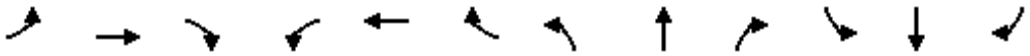
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	3	63	12	3	16	81	1281	25	9	620	24
Future Vol, veh/h	25	3	63	12	3	16	81	1281	25	9	620	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	26	3	66	13	3	17	85	1348	26	9	653	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1530	2228	339	1864	2214	674	678	0	0	1374	0	0
Stage 1	684	684	-	1518	1518	-	-	-	-	-	-	-
Stage 2	846	1544	-	346	696	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	80	42	657	45	43	397	910	-	-	495	-	-
Stage 1	405	447	-	125	180	-	-	-	-	-	-	-
Stage 2	323	175	-	643	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	66	37	657	35	38	397	910	-	-	495	-	-
Mov Cap-2 Maneuver	66	37	-	35	38	-	-	-	-	-	-	-
Stage 1	367	439	-	113	163	-	-	-	-	-	-	-
Stage 2	275	159	-	564	433	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	53.9	101.7	0.5	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	910	-	-	164	67	495	-	-
HCM Lane V/C Ratio	0.094	-	-	0.584	0.487	0.019	-	-
HCM Control Delay (s)	9.4	-	-	53.9	101.7	12.4	-	-
HCM Lane LOS	A	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	3.1	2	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	78	390	41	62	51	738	509	45	25	235	156
Future Volume (veh/h)	87	78	390	41	62	51	738	509	45	25	235	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	91	81	406	43	65	53	769	530	47	26	245	162
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	137	122	1036	109	115	97	851	860	891	50	541	344
Arrive On Green	0.05	0.05	0.05	0.06	0.06	0.06	0.28	0.56	0.56	0.03	0.31	0.31
Sat Flow, veh/h	964	858	2458	1781	1870	1585	3045	1530	1585	1781	1736	1105
Grp Volume(v), veh/h	172	0	406	43	65	53	769	530	47	26	208	199
Grp Sat Flow(s),veh/h/ln	1822	0	1229	1781	1870	1585	1522	1530	1585	1781	1481	1360
Q Serve(g_s), s	12.1	0.0	14.6	3.0	4.4	4.2	31.6	30.2	1.7	1.9	14.6	15.4
Cycle Q Clear(g_c), s	12.1	0.0	14.6	3.0	4.4	4.2	31.6	30.2	1.7	1.9	14.6	15.4
Prop In Lane	0.53		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	259	0	1036	109	115	97	851	860	891	50	462	424
V/C Ratio(X)	0.66	0.00	0.39	0.39	0.57	0.54	0.90	0.62	0.05	0.52	0.45	0.47
Avail Cap(c_a), veh/h	336	0	1141	110	115	98	1012	860	891	84	462	424
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	0.0	28.8	58.7	59.3	59.2	45.1	19.1	12.8	62.3	35.8	36.1
Incr Delay (d2), s/veh	3.6	0.0	0.3	2.8	7.1	7.0	10.3	3.3	0.1	21.1	3.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	4.8	1.5	2.3	1.9	12.8	10.7	0.6	1.1	5.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	0.0	29.1	61.4	66.4	66.2	55.5	22.4	13.0	83.4	39.0	39.8
LnGrp LOS	E	A	C	E	E	E	E	C	B	F	D	D
Approach Vol, veh/h		578			161			1346			433	
Approach Delay, s/veh		39.1			65.0			41.0			42.0	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	80.0		15.0	43.1	47.4		24.5				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	6.1	65.1		8.0	43.2	28.1		24.0				
Max Q Clear Time (g_c+I1), s	3.9	32.2		6.4	33.6	17.4		16.6				
Green Ext Time (p_c), s	0.0	7.5		0.1	2.7	2.9		1.9				

Intersection Summary												
HCM 6th Ctrl Delay			42.2									
HCM 6th LOS			D									



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	74	220	612	26	118	306
Future Volume (veh/h)	74	220	612	26	118	306
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	78	232	644	27	124	322
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	285	254	726	738	375	1027
Arrive On Green	0.16	0.16	0.47	0.47	0.11	0.66
Sat Flow, veh/h	1781	1585	1559	1585	1781	1559
Grp Volume(v), veh/h	78	232	644	27	124	322
Grp Sat Flow(s),veh/h/ln	1781	1585	1559	1585	1781	1559
Q Serve(g_s), s	2.5	9.4	24.5	0.6	1.9	5.8
Cycle Q Clear(g_c), s	2.5	9.4	24.5	0.6	1.9	5.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	285	254	726	738	375	1027
V/C Ratio(X)	0.27	0.91	0.89	0.04	0.33	0.31
Avail Cap(c_a), veh/h	285	254	811	824	415	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	26.9	15.8	9.4	11.8	4.8
Incr Delay (d2), s/veh	0.5	34.7	12.3	0.0	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.7	9.1	0.2	0.6	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.5	61.6	28.1	9.5	12.3	5.1
LnGrp LOS	C	E	C	A	B	A
Approach Vol, veh/h	310		671			446
Approach Delay, s/veh	52.2		27.3			7.1
Approach LOS	D		C			A

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	49.0			12.5	36.5	16.0
Change Period (Y+Rc), s	6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s	47.8			8.6	33.8	10.4
Max Q Clear Time (g_c+I1), s	7.8			3.9	26.5	11.4
Green Ext Time (p_c), s	4.0			0.1	3.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	589	36	17	977	4	40	1	16	1	1	5
Future Volume (veh/h)	2	589	36	17	977	4	40	1	16	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	620	38	18	1028	4	42	1	17	1	1	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	379	2095	128	637	2245	1136	59	1	203	43	30	203
Arrive On Green	0.01	1.00	1.00	0.02	0.72	0.72	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	2997	183	1781	3131	1585	31	6	1585	9	233	1585
Grp Volume(v), veh/h	2	324	334	18	1028	4	43	0	17	2	0	5
Grp Sat Flow(s),veh/h/ln	1781	1566	1615	1781	1566	1585	37	0	1585	241	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.4	18.0	0.1	0.4	0.0	1.2	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	18.0	0.1	16.7	0.0	1.2	16.5	0.0	0.4
Prop In Lane	1.00		0.11	1.00		1.00	0.98		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	379	1094	1129	637	2245	1136	59	0	203	73	0	203
V/C Ratio(X)	0.01	0.30	0.30	0.03	0.46	0.00	0.72	0.00	0.08	0.03	0.00	0.02
Avail Cap(c_a), veh/h	486	1094	1129	711	2245	1136	62	0	206	75	0	206
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.46	0.46	0.46	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	5.1	7.8	5.2	64.7	0.0	49.9	50.3	0.0	49.6
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.0	0.3	0.0	32.6	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.1	5.2	0.0	2.0	0.0	0.5	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	0.7	0.6	5.1	8.1	5.2	97.3	0.0	50.1	50.4	0.0	49.6
LnGrp LOS	A	A	A	A	A	A	F	A	D	D	A	D
Approach Vol, veh/h		660			1050			60			7	
Approach Delay, s/veh		0.7			8.0			83.9			49.8	
Approach LOS		A			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	97.5		23.9	6.2	99.9		23.9
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1
Max Green Setting (Gmax), s	* 8.3	* 85		16.9	* 8.2	* 85		16.9
Max Q Clear Time (g_c+I1), s	2.4	2.0		18.5	2.0	20.0		18.7
Green Ext Time (p_c), s	0.0	9.4		0.0	0.0	19.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	614	29	11	999	29	14	4	6	31	7	135
Future Volume (veh/h)	86	614	29	11	999	29	14	4	6	31	7	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	633	30	11	1030	30	14	4	6	32	7	139
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	473	1849	88	573	1990	1008	36	10	16	152	33	163
Arrive On Green	0.09	1.00	1.00	0.03	1.00	1.00	0.04	0.04	0.04	0.10	0.10	0.10
Sat Flow, veh/h	1781	2797	132	1781	3131	1585	1016	290	435	1474	322	1585
Grp Volume(v), veh/h	89	325	338	11	1030	30	24	0	0	39	0	139
Grp Sat Flow(s),veh/h/ln	1781	1439	1491	1781	1566	1585	1741	0	0	1797	0	1585
Q Serve(g_s), s	2.2	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	2.6	0.0	11.2
Cycle Q Clear(g_c), s	2.2	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	2.6	0.0	11.2
Prop In Lane	1.00		0.09	1.00		1.00	0.58		0.25	0.82		1.00
Lane Grp Cap(c), veh/h	473	951	985	573	1990	1008	62	0	0	185	0	163
V/C Ratio(X)	0.19	0.34	0.34	0.02	0.52	0.03	0.39	0.00	0.00	0.21	0.00	0.85
Avail Cap(c_a), veh/h	517	951	985	635	1990	1008	130	0	0	235	0	207
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.92	0.92	0.92	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.6	0.0	0.0	7.9	0.0	0.0	61.3	0.0	0.0	53.5	0.0	57.3
Incr Delay (d2), s/veh	0.2	0.9	0.9	0.0	0.9	0.1	3.9	0.0	0.0	0.6	0.0	23.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.2	0.2	0.1	0.2	0.0	0.8	0.0	0.0	1.2	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.8	0.9	0.9	7.9	0.9	0.1	65.2	0.0	0.0	54.0	0.0	80.3
LnGrp LOS	A	A	A	A	A	A	E	A	A	D	A	F
Approach Vol, veh/h		752			1071			24			178	
Approach Delay, s/veh		1.6			0.9			65.2			74.6	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	92.2		19.4	10.8	88.9		10.9
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 73		17.0	9.0	* 71		9.7
Max Q Clear Time (g_c+I1), s	2.3	2.0		13.2	4.2	2.0		3.8
Green Ext Time (p_c), s	0.0	9.5		0.2	0.1	20.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	683	175	12	1061	53	222	11	12	20	12	95
Future Volume (veh/h)	76	683	175	12	1061	53	222	11	12	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	719	0	13	1117	56	255	0	0	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	424	1813		532	1749	963	315	165	0	88	55	125
Arrive On Green	0.09	1.00	0.00	0.03	1.00	1.00	0.09	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1121	694	1585
Grp Volume(v), veh/h	80	719	0	13	1117	56	255	0	0	34	0	100
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1814	0	1585
Q Serve(g_s), s	2.1	0.0	0.0	0.4	0.0	0.0	9.1	0.0	0.0	2.3	0.0	8.1
Cycle Q Clear(g_c), s	2.1	0.0	0.0	0.4	0.0	0.0	9.1	0.0	0.0	2.3	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.62		1.00
Lane Grp Cap(c), veh/h	424	1813		532	1749	963	315	165	0	143	0	125
V/C Ratio(X)	0.19	0.40		0.02	0.64	0.06	0.81	0.00	0.00	0.24	0.00	0.80
Avail Cap(c_a), veh/h	442	1813		590	1749	963	430	226	0	293	0	256
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.00	0.85	0.85	0.85	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	0.0	9.0	0.0	0.0	58.2	0.0	0.0	56.2	0.0	58.9
Incr Delay (d2), s/veh	0.2	0.6	0.0	0.0	0.9	0.0	8.0	0.0	0.0	0.8	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.2	0.0	0.1	0.2	0.0	4.5	0.0	0.0	1.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.1	0.6	0.0	9.1	0.9	0.0	66.2	0.0	0.0	57.1	0.0	70.0
LnGrp LOS	A	A		A	A	A	E	A	A	E	A	E
Approach Vol, veh/h		799	A		1186			255			134	
Approach Delay, s/veh		1.4			1.0			66.2			66.7	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	88.2		16.2	10.7	85.3		17.8
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 63		21.0	7.0	* 63		15.7
Max Q Clear Time (g_c+I1), s	2.4	2.0		10.1	4.1	2.0		11.1
Green Ext Time (p_c), s	0.0	11.5		0.3	0.0	23.1		0.4

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	453	806	0	0	1094	298	35	0	118	0	0	0
Future Volume (veh/h)	453	806	0	0	1094	298	35	0	118	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	492	876	0	0	1189	324	38	0	128			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	511	2369	0	0	1685	928	136	0	121			
Arrive On Green	0.40	1.00	0.00	0.00	0.59	0.59	0.08	0.00	0.08			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	492	876	0	0	1189	324	38	0	128			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	22.7	0.0	0.0	0.0	37.9	13.8	2.6	0.0	9.9			
Cycle Q Clear(g_c), s	22.7	0.0	0.0	0.0	37.9	13.8	2.6	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	511	2369	0	0	1685	928	136	0	121			
V/C Ratio(X)	0.96	0.37	0.00	0.00	0.71	0.35	0.28	0.00	1.06			
Avail Cap(c_a), veh/h	636	2391	0	0	1685	928	136	0	121			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.61	0.61	0.00	0.00	0.65	0.65	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.3	0.0	0.0	0.0	19.0	14.0	56.7	0.0	60.1			
Incr Delay (d2), s/veh	17.3	0.3	0.0	0.0	1.6	0.7	1.1	0.0	99.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.8	0.1	0.0	0.0	11.9	4.8	1.2	0.0	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	0.3	0.0	0.0	20.7	14.7	57.8	0.0	159.1			
LnGrp LOS	D	A	A	A	C	B	E	A	F			
Approach Vol, veh/h		1368			1513			166				
Approach Delay, s/veh		14.4			19.4			135.9				
Approach LOS		B			B			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			30.9	83.1		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			24.7	39.9		11.9				
Green Ext Time (p_c), s		16.2			1.2	18.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1112	61	111	1024	0	0	0	0	159	0	440
Future Volume (veh/h)	0	1112	61	111	1024	0	0	0	0	159	0	440
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1222	67	122	1125	0				175	0	484
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1757	96	408	2084	0				643	0	572
Arrive On Green	0.00	1.00	1.00	0.02	0.24	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	2850	152	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	633	656	122	1125	0				175	0	484
Grp Sat Flow(s),veh/h/ln	0	1439	1487	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	2.9	44.4	0.0				5.5	0.0	19.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.9	44.4	0.0				5.5	0.0	19.2
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	911	942	408	2084	0				643	0	572
V/C Ratio(X)	0.00	0.69	0.70	0.30	0.54	0.00				0.27	0.00	0.85
Avail Cap(c_a), veh/h	0	911	942	438	2084	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.85	0.85	0.62	0.62	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	6.7	30.5	0.0				45.9	0.0	51.5
Incr Delay (d2), s/veh	0.0	3.7	3.6	0.1	0.6	0.0				0.3	0.0	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.9	0.9	1.0	17.2	0.0				2.4	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.7	3.6	6.8	31.2	0.0				46.2	0.0	59.1
LnGrp LOS	A	A	A	A	C	A				D	A	E
Approach Vol, veh/h		1289			1247						659	
Approach Delay, s/veh		3.7			28.8						55.7	
Approach LOS		A			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.8	88.2		30.0		100.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	4.9	2.0		21.2		46.4
Green Ext Time (p_c), s	0.0	28.2		2.3		19.2

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1020	27	92	1314	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1020	27	92	1314	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	1121	30	101	1444	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	350	2354	1150	463	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	1121	30	101	1444	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	2354	1150	463	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.10	0.48	0.03	0.22	0.60	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	371	2354	1150	492	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.1	0.8	0.1	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.5	0.3	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	0.6	0.0	4.1	0.8	0.1	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		1186			1597			114			179	
Approach Delay, s/veh		0.7			1.0			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	6.3	* 84		* 21	4.4	* 86		* 21
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8
Green Ext Time (p_c), s	0.0	24.2		0.5	0.0	39.1		0.2

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	860	84	31	1141	198	76	28	30	197	27	230
Future Volume (veh/h)	137	860	84	31	1141	198	76	28	30	197	27	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	935	91	34	1240	215	83	30	33	214	29	250
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	350	1843	901	410	1752	856	231	69	76	339	301	255
Arrive On Green	0.11	1.00	1.00	0.07	1.00	1.00	0.05	0.09	0.09	0.12	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	1781	1870	1585
Grp Volume(v), veh/h	149	935	91	34	1240	215	83	0	63	214	29	250
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1781	1870	1585
Q Serve(g_s), s	5.0	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	13.8	1.7	20.4
Cycle Q Clear(g_c), s	5.0	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	13.8	1.7	20.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	350	1843	901	410	1752	856	231	0	146	339	301	255
V/C Ratio(X)	0.43	0.51	0.10	0.08	0.71	0.25	0.36	0.00	0.43	0.63	0.10	0.98
Avail Cap(c_a), veh/h	413	1843	901	434	1752	856	231	0	146	342	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.77	0.77	0.77	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	0.0	0.0	11.7	0.0	0.0	51.4	0.0	56.5	44.9	46.5	54.4
Incr Delay (d2), s/veh	0.7	0.9	0.2	0.1	1.9	0.5	0.9	0.0	4.3	3.7	0.3	51.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.2	0.0	0.4	0.5	0.1	2.6	0.0	2.2	6.4	0.8	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	0.9	0.2	11.8	1.9	0.5	52.4	0.0	60.7	48.5	46.8	105.5
LnGrp LOS	B	A	A	B	A	A	D	A	E	D	D	F
Approach Vol, veh/h		1175			1489			146			493	
Approach Delay, s/veh		2.2			1.9			56.0			77.3	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	13.4	76.6	21.8	18.2
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.3	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.5	22.4	7.0	2.0	15.8	6.6
Green Ext Time (p_c), s	0.0	18.4	0.0	0.0	0.1	30.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	558	980	0	0	859	624	249	0	177	0	0	0
Future Volume (veh/h)	558	980	0	0	859	624	249	0	177	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	613	1077	0	0	944	0	274	0	195			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	661	2369	0	0	1693		302	0	269			
Arrive On Green	0.05	0.24	0.00	0.00	1.00	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	613	1077	0	0	944	0	274	0	195			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	17.6	36.8	0.0	0.0	0.0	0.0	19.6	0.0	15.1			
Cycle Q Clear(g_c), s	17.6	36.8	0.0	0.0	0.0	0.0	19.6	0.0	15.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	661	2369	0	0	1693		302	0	269			
V/C Ratio(X)	0.93	0.45	0.00	0.00	0.56		0.91	0.00	0.72			
Avail Cap(c_a), veh/h	934	2369	0	0	1693		341	0	304			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	0.66	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	14.2	27.3	0.0	0.0	0.0	0.0	53.0	0.0	51.1			
Incr Delay (d2), s/veh	8.8	0.4	0.0	0.0	0.9	0.0	23.6	0.0	5.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.5	16.0	0.0	0.0	0.2	0.0	10.4	0.0	6.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	27.7	0.0	0.0	0.9	0.0	76.5	0.0	56.9			
LnGrp LOS	C	C	A	A	A		E	A	E			
Approach Vol, veh/h		1690			944	A		469				
Approach Delay, s/veh		26.0			0.9			68.4				
Approach LOS		C			A			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		101.8			27.1	74.7		28.2				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		38.8			19.6	2.0		21.6				
Green Ext Time (p_c), s		19.8			2.0	15.3		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1230	265	96	972	0	0	0	0	321	0	218
Future Volume (veh/h)	0	1230	265	96	972	0	0	0	0	321	0	218
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1367	294	107	1080	0				357	0	242
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2087	1020	329	2378	0				608	0	270
Arrive On Green	0.00	1.00	1.00	0.09	1.00	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1367	294	107	1080	0				357	0	242
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	2.5	0.0	0.0				12.0	0.0	19.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.5	0.0	0.0				12.0	0.0	19.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2087	1020	329	2378	0				608	0	270
V/C Ratio(X)	0.00	0.65	0.29	0.33	0.45	0.00				0.59	0.00	0.89
Avail Cap(c_a), veh/h	0	2087	1020	374	2378	0				680	0	302
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.31	0.52	0.52	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.8	0.0	0.0				49.7	0.0	52.8
Incr Delay (d2), s/veh	0.0	0.5	0.2	0.3	0.3	0.0				1.1	0.0	25.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.8	0.1	0.0				5.2	0.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.2	6.1	0.3	0.0				50.8	0.0	78.1
LnGrp LOS	A	A	A	A	A	A				D	A	E
Approach Vol, veh/h		1661			1187						599	
Approach Delay, s/veh		0.5			0.8						61.8	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	89.9		28.4		101.6
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.3	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	14.5	2.0		21.4		2.0
Green Ext Time (p_c), s	0.1	39.9		0.8		22.5

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	65	723	60	42	201	782	113	57	157	576	117	67	54
Future Volume (veh/h)	65	723	60	42	201	782	113	57	157	576	117	67	54
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870		1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	795	66		221	859	124	63	173	633	129	74	59
Peak Hour Factor	0.91	0.91	0.91		0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2		2	13	2	2	2	2	2	2	2
Cap, veh/h	147	961	482		270	1102	538	143	1241	554	167	1280	571
Arrive On Green	0.09	0.61	0.61		0.16	0.68	0.68	0.04	0.35	0.35	0.05	0.36	0.36
Sat Flow, veh/h	3456	3159	1585		3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	71	795	66		221	859	124	63	173	633	129	74	59
Grp Sat Flow(s),veh/h/ln	1728	1580	1585		1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.5	25.8	2.3		8.0	23.5	3.9	2.3	4.3	45.4	4.8	1.8	3.2
Cycle Q Clear(g_c), s	2.5	25.8	2.3		8.0	23.5	3.9	2.3	4.3	45.4	4.8	1.8	3.2
Prop In Lane	1.00		1.00		1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	961	482		270	1102	538	143	1241	554	167	1280	571
V/C Ratio(X)	0.48	0.83	0.14		0.82	0.78	0.23	0.44	0.14	1.14	0.77	0.06	0.10
Avail Cap(c_a), veh/h	162	961	482		308	1102	538	159	1241	554	167	1280	571
HCM Platoon Ratio	2.00	2.00	2.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87		0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	22.8	18.2		54.0	17.5	14.4	60.8	28.9	42.3	61.1	27.2	27.6
Incr Delay (d2), s/veh	2.1	7.1	0.5		12.6	4.8	0.9	2.1	0.1	84.4	19.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.6	0.9		3.7	5.6	1.4	1.0	1.8	29.9	2.5	0.8	1.2
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	60.2	29.9	18.7		66.6	22.3	15.2	63.0	29.0	126.7	80.5	27.2	27.7
LnGrp LOS	E	C	B		E	C	B	E	C	F	F	C	C
Approach Vol, veh/h		932				1204			869			262	
Approach Delay, s/veh		31.4				29.7			102.6			53.6	
Approach LOS		C				C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	51.3	12.3	53.4	17.7	46.6	13.7	52.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	4.5	25.5	4.3	5.2	10.0	27.8	6.8	47.4
Green Ext Time (p_c), s	0.0	9.7	0.0	0.6	0.1	5.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	0	0	585	12	79	774	0	27	0	252	0	0	0
Future Volume (veh/h)	0	0	585	12	79	774	0	27	0	252	0	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach			No			No			No				
Adj Sat Flow, veh/h/ln		0	1663	1826	1826	1663	0	1856	1856	1856			
Adj Flow Rate, veh/h		0	650	13	88	860	0	30	0	280			
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %		0	16	5	5	16	0	3	3	3			
Cap, veh/h		0	1334	653	444	1857	0	361	0	321			
Arrive On Green		0.00	0.42	0.42	0.15	1.00	0.00	0.20	0.00	0.20			
Sat Flow, veh/h		0	3243	1547	1739	3243	0	1767	0	1572			
Grp Volume(v), veh/h		0	650	13	88	860	0	30	0	280			
Grp Sat Flow(s),veh/h/ln		0	1580	1547	1739	1580	0	1767	0	1572			
Q Serve(g_s), s		0.0	9.7	0.3	1.6	0.0	0.0	0.9	0.0	11.2			
Cycle Q Clear(g_c), s		0.0	9.7	0.3	1.6	0.0	0.0	0.9	0.0	11.2			
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h		0	1334	653	444	1857	0	361	0	321			
V/C Ratio(X)		0.00	0.49	0.02	0.20	0.46	0.00	0.08	0.00	0.87			
Avail Cap(c_a), veh/h		0	1334	653	477	1857	0	389	0	346			
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)		0.00	1.00	1.00	0.67	0.67	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh		0.0	13.7	10.9	8.2	0.0	0.0	20.9	0.0	25.0			
Incr Delay (d2), s/veh		0.0	1.3	0.1	0.1	0.6	0.0	0.1	0.0	19.8			
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln		0.0	3.1	0.1	0.4	0.1	0.0	0.4	0.0	5.6			
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh		0.0	14.9	11.0	8.3	0.6	0.0	21.0	0.0	44.8			
LnGrp LOS		A	B	B	A	A	A	C	A	D			
Approach Vol, veh/h			663			948			310				
Approach Delay, s/veh			14.9			1.3			42.5				
Approach LOS			B			A			D				

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	45.0			10.8	34.2		20.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	37.2			6.0	25.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			3.6	11.7		13.2					
Green Ext Time (p_c), s	15.9			0.0	6.8		0.1					

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	41.9

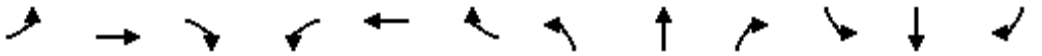
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	164	247	280	81	63	77
Future Vol, veh/h	164	247	280	81	63	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	269	405	459	133	103	126

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	592	0	-	0	1469	526
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	943	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	979	-	-	-	138	546
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	374	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	979	-	-	-	~ 89	546
Mov Cap-2 Maneuver	-	-	-	-	~ 89	-
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	374	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	261.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	979	-	-	-	165
HCM Lane V/C Ratio	0.275	-	-	-	1.391
HCM Control Delay (s)	10.1	0	-	-	261.1
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	1.1	-	-	-	14.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	200	43	88	238	465	38	291	74	153	61	12
Future Volume (veh/h)	25	200	43	88	238	465	38	291	74	153	61	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	225	48	99	267	522	43	327	83	172	69	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	283	625	530	397	620	525	526	408	346	390	526	446
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.06	0.22	0.22	0.12	0.28	0.28
Sat Flow, veh/h	687	1870	1585	1097	1856	1572	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	28	225	48	99	267	522	43	327	83	172	69	13
Grp Sat Flow(s),veh/h/ln	687	1870	1585	1097	1856	1572	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.8	5.0	1.2	4.2	6.2	18.3	1.0	9.2	2.4	3.9	1.5	0.3
Cycle Q Clear(g_c), s	8.0	5.0	1.2	9.2	6.2	18.3	1.0	9.2	2.4	3.9	1.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	625	530	397	620	525	526	408	346	390	526	446
V/C Ratio(X)	0.10	0.36	0.09	0.25	0.43	0.99	0.08	0.80	0.24	0.44	0.13	0.03
Avail Cap(c_a), veh/h	283	625	530	397	620	525	642	547	464	406	564	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	14.0	12.7	17.4	14.3	18.4	14.7	20.5	17.9	14.5	14.8	14.4
Incr Delay (d2), s/veh	0.3	0.7	0.2	0.7	1.0	37.6	0.1	6.2	0.4	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.8	0.4	1.0	2.3	10.7	0.3	4.1	0.8	1.3	0.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	14.7	12.8	18.1	15.4	56.0	14.8	26.7	18.2	15.2	15.0	14.4
LnGrp LOS	B	B	B	B	B	E	B	C	B	B	B	B
Approach Vol, veh/h		301			888			453			254	
Approach Delay, s/veh		14.7			39.5			24.0			15.1	
Approach LOS		B			D			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	9.2	21.4		24.8	12.7	17.9				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		10.0	3.0	3.5		20.3	5.9	11.2				
Green Ext Time (p_c), s		1.7	0.0	0.2		0.0	0.0	0.9				

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	301	68	93	546	43	187	29	126	62	36	95
Future Volume (veh/h)	26	301	68	93	546	43	187	29	126	62	36	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	342	77	106	620	49	212	33	143	70	41	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	263	653	553	465	739	626	353	82	357	328	123	323
Arrive On Green	0.04	0.35	0.35	0.09	0.40	0.40	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	1870	1585	1767	1856	1572	1239	306	1326	1209	455	1199
Grp Volume(v), veh/h	30	342	77	106	620	49	212	0	176	70	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	1856	1572	1239	0	1632	1209	0	1654
Q Serve(g_s), s	0.7	9.6	2.2	2.4	19.9	1.3	11.0	0.0	5.8	3.3	0.0	4.8
Cycle Q Clear(g_c), s	0.7	9.6	2.2	2.4	19.9	1.3	15.7	0.0	5.8	9.2	0.0	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.72
Lane Grp Cap(c), veh/h	263	653	553	465	739	626	353	0	439	328	0	446
V/C Ratio(X)	0.11	0.52	0.14	0.23	0.84	0.08	0.60	0.00	0.40	0.21	0.00	0.33
Avail Cap(c_a), veh/h	372	878	744	492	871	738	357	0	445	337	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	17.1	14.7	11.8	18.0	12.3	25.7	0.0	19.8	23.5	0.0	19.4
Incr Delay (d2), s/veh	0.1	1.4	0.2	0.1	7.9	0.1	2.7	0.0	0.6	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.7	0.7	0.8	8.6	0.4	3.4	0.0	2.2	0.9	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	18.5	14.9	11.9	25.9	12.5	28.4	0.0	20.4	23.8	0.0	19.8
LnGrp LOS	B	B	B	B	C	B	C	A	C	C	A	B
Approach Vol, veh/h		449			775			388			219	
Approach Delay, s/veh		17.6			23.1			24.8			21.1	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	29.2		24.5	9.2	32.4		24.5
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7
Max Green Setting (Gmax), s	7.0	* 31		* 18	7.0	* 31		18.0
Max Q Clear Time (g_c+I1), s	4.4	11.6		11.2	2.7	21.9		17.7
Green Ext Time (p_c), s	0.0	3.9		0.6	0.0	4.3		0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	129	336	16	140	21	248	283	13	17	223	141
Future Volume (veh/h)	166	129	336	16	140	21	248	283	13	17	223	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	184	143	373	18	156	23	276	314	14	19	248	157
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	424	505	428	326	290	43	398	510	23	305	364	308
Arrive On Green	0.11	0.27	0.27	0.03	0.18	0.18	0.12	0.29	0.29	0.03	0.20	0.20
Sat Flow, veh/h	1781	1870	1585	1767	1581	233	1781	1777	79	1753	1841	1560
Grp Volume(v), veh/h	184	143	373	18	0	179	276	0	328	19	248	157
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1814	1781	0	1856	1753	1841	1560
Q Serve(g_s), s	4.8	3.6	13.5	0.5	0.0	5.4	7.0	0.0	9.2	0.5	7.5	5.4
Cycle Q Clear(g_c), s	4.8	3.6	13.5	0.5	0.0	5.4	7.0	0.0	9.2	0.5	7.5	5.4
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	424	505	428	326	0	333	398	0	532	305	364	308
V/C Ratio(X)	0.43	0.28	0.87	0.06	0.00	0.54	0.69	0.00	0.62	0.06	0.68	0.51
Avail Cap(c_a), veh/h	437	590	500	462	0	539	398	0	629	433	593	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	17.4	21.0	19.0	0.0	22.3	17.0	0.0	18.6	18.4	22.4	21.6
Incr Delay (d2), s/veh	0.7	0.3	13.8	0.1	0.0	1.4	5.1	0.0	2.6	0.1	4.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.4	6.1	0.2	0.0	2.2	3.0	0.0	3.7	0.2	3.3	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	17.7	34.8	19.1	0.0	23.6	22.1	0.0	21.2	18.5	27.1	24.3
LnGrp LOS	B	B	C	B	A	C	C	A	C	B	C	C
Approach Vol, veh/h		700			197			604			424	
Approach Delay, s/veh		26.7			23.2			21.6			25.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	22.9	7.4	22.4	13.0	17.5	12.6	17.1
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.5	11.2	2.5	15.5	9.0	9.5	6.8	7.4
Green Ext Time (p_c), s	0.0	2.0	0.0	0.7	0.0	2.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	4	8	96	2	117	1	378	119	157	420	7
Future Volume (veh/h)	19	4	8	96	2	117	1	378	119	157	420	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1900	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	21	4	9	108	2	131	1	425	134	176	472	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	3	0	0	0	1	3	0	2	0
Cap, veh/h	50	14	7	206	4	251	637	1211	1010	659	1340	1154
Arrive On Green	0.08	0.08	0.08	0.04	0.16	0.16	0.00	0.64	0.64	0.08	0.72	0.72
Sat Flow, veh/h	63	167	83	1767	24	1590	1810	1885	1572	1810	1870	1610
Grp Volume(v), veh/h	34	0	0	108	0	133	1	425	134	176	472	8
Grp Sat Flow(s),veh/h/ln	313	0	0	1767	0	1614	1810	1885	1572	1810	1870	1610
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	9.8	0.0	13.5	2.8	3.7	12.4	0.2
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.0	0.0	9.8	0.0	13.5	2.8	3.7	12.4	0.2
Prop In Lane	0.62		0.26	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	0	0	206	0	255	637	1211	1010	659	1340	1154
V/C Ratio(X)	0.48	0.00	0.00	0.52	0.00	0.52	0.00	0.35	0.13	0.27	0.35	0.01
Avail Cap(c_a), veh/h	150	0	0	344	0	484	799	1211	1010	771	1340	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	59.9	0.0	0.0	56.8	0.0	50.3	8.2	10.7	3.9	6.2	7.0	5.3
Incr Delay (d2), s/veh	10.6	0.0	0.0	2.1	0.0	3.5	0.0	0.8	0.3	0.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	3.5	0.0	4.2	0.0	5.4	1.5	1.2	4.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.5	0.0	0.0	58.9	0.0	53.8	8.2	11.5	4.2	6.5	7.6	5.3
LnGrp LOS	E	A	A	E	A	D	A	B	A	A	A	A
Approach Vol, veh/h		34			241			560			656	
Approach Delay, s/veh		70.5			56.1			9.8			7.3	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	88.5	10.9	15.6	5.4	98.1		26.5
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0		* 6
Max Green Setting (Gmax), s	10.0	58.0	15.0	18.0	12.0	64.0		* 39
Max Q Clear Time (g_c+I1), s	15.7	15.5	2.0	12.6	2.0	14.4		11.8
Green Ext Time (p_c), s	0.6	6.7	0.2	0.1	0.0	6.5		1.4

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

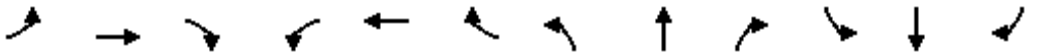
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	272	178	37	43	21
Future Vol, veh/h	21	272	178	37	43	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	316	207	43	50	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	250	0	-	0	593	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	364	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1316	-	-	-	468	810
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	703	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1316	-	-	-	458	810
Mov Cap-2 Maneuver	-	-	-	-	458	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	703	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	-	534
HCM Lane V/C Ratio	0.019	-	-	-	0.139
HCM Control Delay (s)	7.8	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	11	227	57	23	11	124	363	18	3	546	56
Future Volume (veh/h)	85	11	227	57	23	11	124	363	18	3	546	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1900	1870	1826	1737	1900	1826	1826
Adj Flow Rate, veh/h	93	12	249	63	25	12	136	399	20	3	600	62
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	1	0	0	0	2	5	11	0	5	5
Cap, veh/h	96	7	408	88	21	411	294	884	713	445	667	69
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.08	0.48	0.48	0.00	0.41	0.41
Sat Flow, veh/h	0	27	1598	0	84	1610	1781	1826	1472	1810	1627	168
Grp Volume(v), veh/h	105	0	249	88	0	12	136	399	20	3	0	662
Grp Sat Flow(s),veh/h/ln	27	0	1598	84	0	1610	1781	1826	1472	1810	0	1796
Q Serve(g_s), s	0.0	0.0	9.7	0.0	0.0	0.4	2.9	10.2	0.5	0.1	0.0	24.3
Cycle Q Clear(g_c), s	18.0	0.0	9.7	18.0	0.0	0.4	2.9	10.2	0.5	0.1	0.0	24.3
Prop In Lane	0.89		1.00	0.72		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	103	0	408	109	0	411	294	884	713	445	0	736
V/C Ratio(X)	1.02	0.00	0.61	0.81	0.00	0.03	0.46	0.45	0.03	0.01	0.00	0.90
Avail Cap(c_a), veh/h	103	0	408	109	0	411	355	884	713	642	0	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	23.1	31.0	0.0	19.7	14.9	12.0	9.5	12.3	0.0	19.4
Incr Delay (d2), s/veh	93.1	0.0	2.6	34.5	0.0	0.0	0.8	0.8	0.0	0.0	0.0	13.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.8	2.5	0.0	0.1	1.0	3.5	0.1	0.0	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.2	0.0	25.8	65.4	0.0	19.7	15.7	12.8	9.5	12.3	0.0	33.2
LnGrp LOS	F	A	C	E	A	B	B	B	A	B	A	C
Approach Vol, veh/h		354			100			555			665	
Approach Delay, s/veh		55.9			59.9			13.4			33.1	
Approach LOS		E			E			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	40.1		24.0	11.6	34.9		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	31.0		18.0	8.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	12.2		20.0	4.9	26.3		20.0				
Green Ext Time (p_c), s	0.0	4.1		0.0	0.1	2.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		33.0	
HCM 6th LOS		C	

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	1	30	2	0	1	30	409	2	1	583	81
Future Vol, veh/h	84	1	30	2	0	1	30	409	2	1	583	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	175	-	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	0	7	0	0	0	5	5	0	0	5	5
Mvmt Flow	90	1	32	2	0	1	32	440	2	1	627	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1135	1135	627	1193	1220	440	714	0	0	442	0	0
Stage 1	629	629	-	504	504	-	-	-	-	-	-	-
Stage 2	506	506	-	689	716	-	-	-	-	-	-	-
Critical Hdwy	7.17	6.5	6.27	7.1	6.5	6.2	4.15	-	-	4.1	-	-
Critical Hdwy Stg 1	6.17	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.17	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4	3.363	3.5	4	3.3	2.245	-	-	2.2	-	-
Pot Cap-1 Maneuver	175	204	475	165	182	621	872	-	-	1129	-	-
Stage 1	462	478	-	554	544	-	-	-	-	-	-	-
Stage 2	540	543	-	439	437	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	194	475	147	173	621	872	-	-	1129	-	-
Mov Cap-2 Maneuver	168	194	-	147	173	-	-	-	-	-	-	-
Stage 1	439	478	-	527	517	-	-	-	-	-	-	-
Stage 2	513	516	-	408	437	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.5	23.6	0.6	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	872	-	-	202	197	1129	-	-
HCM Lane V/C Ratio	0.037	-	-	0.612	0.016	0.001	-	-
HCM Control Delay (s)	9.3	0	-	47.5	23.6	8.2	0	-
HCM Lane LOS	A	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.5	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	107	5	4	99	3	5	54	7	4	59	74
Future Vol, veh/h	50	107	5	4	99	3	5	54	7	4	59	74
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	2	0	0	8	0	0	2	14	0	2	0
Mvmt Flow	63	135	6	5	125	4	6	68	9	5	75	94
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	8.8	8.6	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	31%	4%	3%
Vol Thru, %	82%	66%	93%	43%
Vol Right, %	11%	3%	3%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	162	106	137
LT Vol	5	50	4	4
Through Vol	54	107	99	59
RT Vol	7	5	3	74
Lane Flow Rate	84	205	134	173
Geometry Grp	1	1	1	1
Degree of Util (X)	0.113	0.272	0.177	0.217
Departure Headway (Hd)	4.876	4.771	4.74	4.5
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	731	751	753	794
Service Time	2.931	2.819	2.792	2.547
HCM Lane V/C Ratio	0.115	0.273	0.178	0.218
HCM Control Delay	8.6	9.6	8.8	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1.1	0.6	0.8

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	96	40	11	177	44	52	6	15	13	4	1
Future Vol, veh/h	3	96	40	11	177	44	52	6	15	13	4	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	102	43	12	188	47	55	6	16	14	4	1
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.6	9.5	8.5	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	71%	100%	0%	100%	0%	72%
Vol Thru, %	8%	0%	71%	0%	80%	22%
Vol Right, %	21%	0%	29%	0%	20%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	3	136	11	221	18
LT Vol	52	3	0	11	0	13
Through Vol	6	0	96	0	177	4
RT Vol	15	0	40	0	44	1
Lane Flow Rate	78	3	145	12	235	19
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.106	0.005	0.192	0.018	0.311	0.027
Departure Headway (Hd)	4.91	5.483	4.774	5.401	4.759	5.087
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	730	654	752	664	757	703
Service Time	2.938	3.206	2.497	3.122	2.48	3.12
HCM Lane V/C Ratio	0.107	0.005	0.193	0.018	0.31	0.027
HCM Control Delay	8.5	8.2	8.6	8.2	9.6	8.3
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0	0.7	0.1	1.3	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	8	462	5	4	339
Future Vol, veh/h	12	8	462	5	4	339
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	13	9	513	6	4	377

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	898	513	0	0	519	0
Stage 1	513	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	310	561	-	-	1037	-
Stage 1	601	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	308	561	-	-	1037	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	685	-	-	-	-	-

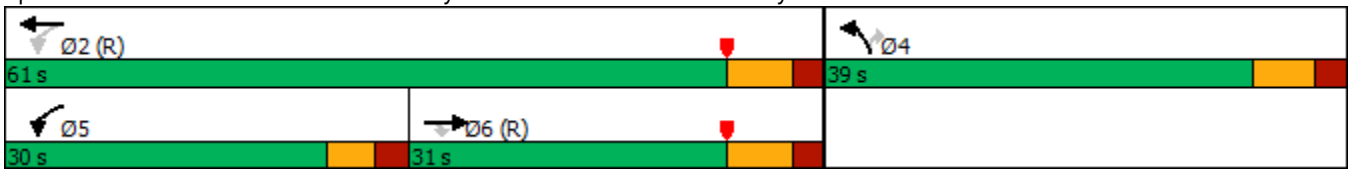
Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	376	1037	-
HCM Lane V/C Ratio	-	-	0.059	0.004	-
HCM Control Delay (s)	-	-	15.2	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	491	302	380	832	356	269
Future Volume (vph)	491	302	380	832	356	269
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	28.4	28.4	56.9	55.7	29.9	29.9
Actuated g/C Ratio	0.28	0.28	0.57	0.56	0.30	0.30
v/c Ratio	0.65	0.54	0.84	0.53	0.90	0.49
Control Delay	37.4	7.4	30.7	15.8	58.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	7.4	30.7	15.8	58.2	6.2
LOS	D	A	C	B	E	A
Approach Delay	26.0			20.5	35.9	
Approach LOS	C			C	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	534	328	413	904	387	292
v/c Ratio	0.65	0.54	0.84	0.53	0.90	0.49
Control Delay	37.4	7.4	30.7	15.8	58.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	7.4	30.7	15.8	58.2	6.2
Queue Length 50th (ft)	167	0	154	188	228	0
Queue Length 95th (ft)	231	75	#294	246	#390	60
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	826	604	522	1703	460	611
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.54	0.79	0.53	0.84	0.48

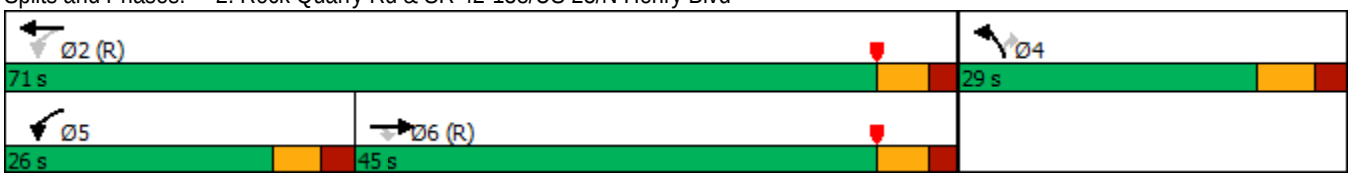
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	666	183	348	1085	143	324
Future Volume (vph)	666	183	348	1085	143	324
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	47.2	47.2	67.0	66.9	20.1	20.1
Actuated g/C Ratio	0.47	0.47	0.67	0.67	0.20	0.20
v/c Ratio	0.51	0.23	0.69	0.59	0.42	0.58
Control Delay	9.9	1.0	14.5	10.6	39.1	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	1.0	14.5	10.6	39.1	8.2
LOS	A	A	B	B	D	A
Approach Delay	8.0			11.5	17.7	
Approach LOS	A			B	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	701	193	366	1142	151	341
v/c Ratio	0.51	0.23	0.69	0.59	0.42	0.58
Control Delay	9.9	1.0	14.5	10.6	39.1	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	1.0	14.5	10.6	39.1	8.2
Queue Length 50th (ft)	68	0	86	185	85	0
Queue Length 95th (ft)	71	3	134	247	145	74
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			135
Base Capacity (vph)	1385	849	605	1946	391	615
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.23	0.60	0.59	0.39	0.55

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	845	7	1233	8	2
Future Volume (vph)	845	7	1233	8	2
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	87.0	87.0	87.0	13.0	13.0
Total Split (%)	87.0%	87.0%	87.0%	13.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	96.1	96.1	96.1	6.1	6.1
Actuated g/C Ratio	0.96	0.96	0.96	0.06	0.06
v/c Ratio	0.31	0.01	0.45	0.07	0.02
Control Delay	0.9	0.4	0.7	45.5	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.9	0.4	0.7	45.5	31.5
LOS	A	A	A	D	C
Approach Delay	0.9		0.7	42.7	
Approach LOS	A		A	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 1.0	Intersection LOS: A
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	869	7	1258	8	2
v/c Ratio	0.31	0.01	0.45	0.07	0.02
Control Delay	0.9	0.4	0.7	45.5	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.9	0.4	0.7	45.5	31.5
Queue Length 50th (ft)	0	0	0	5	0
Queue Length 95th (ft)	m68	m1	56	20	7
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2822	583	2821	123	112
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.01	0.45	0.07	0.02

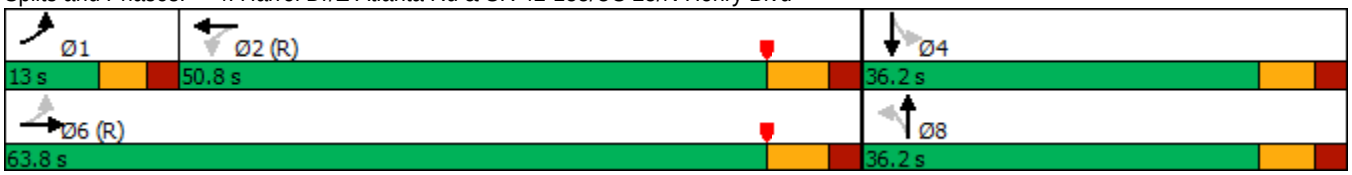
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	157	614	15	1068	58	27	229	5
Future Volume (vph)	157	614	15	1068	58	27	229	5
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	13.0	63.8	50.8	50.8	36.2	36.2	36.2	36.2
Total Split (%)	13.0%	63.8%	50.8%	50.8%	36.2%	36.2%	36.2%	36.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	57.8	56.7	43.7	43.7		29.5		29.5
Actuated g/C Ratio	0.58	0.57	0.44	0.44		0.30		0.30
v/c Ratio	0.94	0.42	0.05	1.01		0.33		1.03
Control Delay	69.4	13.4	16.4	49.9		24.3		89.0
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	69.4	13.4	16.4	49.9		24.3		89.0
LOS	E	B	B	D		C		F
Approach Delay		23.9		49.5		24.3		89.0
Approach LOS		C		D		C		F

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 45.2	Intersection LOS: D
Intersection Capacity Utilization 86.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	164	707	16	1290	137	361
v/c Ratio	0.94	0.42	0.05	1.01	0.33	1.03
Control Delay	69.4	13.4	16.4	49.9	24.3	89.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.4	13.4	16.4	49.9	24.3	89.0
Queue Length 50th (ft)	57	181	5	~435	53	~235
Queue Length 95th (ft)	#180	215	m12	#572	106	#416
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	174	1688	311	1277	419	352
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.42	0.05	1.01	0.33	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

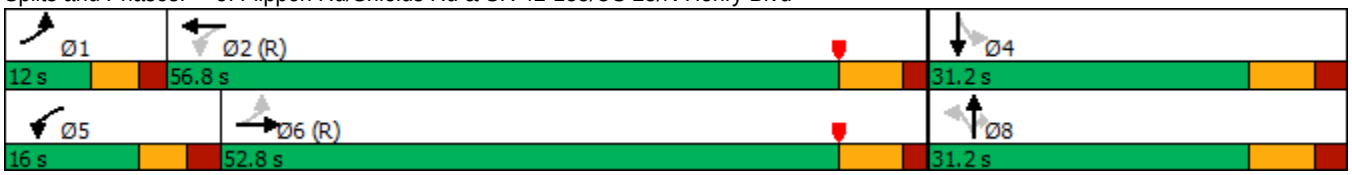
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

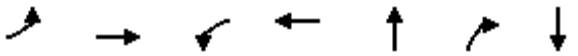
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	4	702	154	1238	189	13	157	22	38
Future Volume (vph)	4	702	154	1238	189	13	157	22	38
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	56.5	49.4	64.6	61.9		21.7	21.7		21.7
Actuated g/C Ratio	0.56	0.49	0.65	0.62		0.22	0.22		0.22
v/c Ratio	0.02	0.58	0.41	0.71		0.77	0.39		0.23
Control Delay	7.5	20.3	4.8	8.9		56.0	16.3		27.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	7.5	20.3	4.8	8.9		56.0	16.3		27.8
LOS	A	C	A	A		E	B		C
Approach Delay		20.3		8.4		38.7			27.8
Approach LOS		C		A		D			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 73.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	834	162	1309	213	165	80
v/c Ratio	0.02	0.58	0.41	0.71	0.77	0.39	0.23
Control Delay	7.5	20.3	4.8	8.9	56.0	16.3	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	20.3	4.8	8.9	56.0	16.3	27.8
Queue Length 50th (ft)	1	202	12	55	123	32	34
Queue Length 95th (ft)	5	264	m12	m450	#226	90	74
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	263	1441	415	1831	305	456	382
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.58	0.39	0.71	0.70	0.36	0.21

Intersection Summary

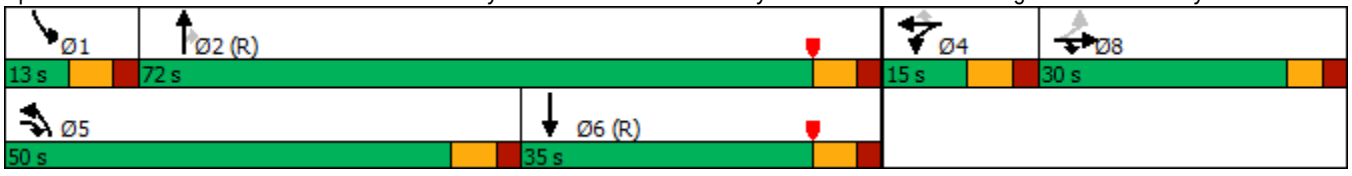
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	87	78	390	41	62	51	738	509	45	25	235
Future Volume (vph)	87	78	390	41	62	51	738	509	45	25	235
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		8	8 5	4	4		5	2		1	6
Permitted Phases	8					4			2		
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9
Total Split (s)	30.0	30.0		15.0	15.0	15.0	50.0	72.0	72.0	13.0	35.0
Total Split (%)	23.1%	23.1%		11.5%	11.5%	11.5%	38.5%	55.4%	55.4%	10.0%	26.9%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		21.1	67.2	9.4	9.4	9.4	39.4	74.1	74.1	7.8	36.5
Actuated g/C Ratio		0.16	0.52	0.07	0.07	0.07	0.30	0.57	0.57	0.06	0.28
v/c Ratio		0.77	0.32	0.34	0.49	0.18	0.85	0.61	0.05	0.25	0.47
Control Delay		64.4	21.1	65.0	70.5	1.3	52.1	26.0	0.1	65.2	32.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		64.4	21.1	65.0	70.5	1.3	52.1	26.0	0.1	65.2	32.5
LOS		E	C	E	E	A	D	C	A	E	C
Approach Delay		34.0			46.3			40.0			34.4
Approach LOS		C			D			D			C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 38.1	Intersection LOS: D
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	172	406	43	65	53	769	530	47	26	408
v/c Ratio	0.77	0.32	0.34	0.49	0.18	0.85	0.61	0.05	0.25	0.47
Control Delay	64.4	21.1	65.0	70.5	1.3	52.1	26.0	0.1	65.2	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	21.1	65.0	70.5	1.3	52.1	26.0	0.1	65.2	32.5
Queue Length 50th (ft)	155	142	35	53	0	307	361	0	21	117
Queue Length 95th (ft)	#233	231	76	#113	0	377	472	0	54	175
Internal Link Dist (ft)	895			523			751			1095
Turn Bay Length (ft)					100	340		290	580	
Base Capacity (vph)	254	1307	127	134	297	994	886	982	105	884
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.31	0.34	0.49	0.18	0.77	0.60	0.05	0.25	0.46

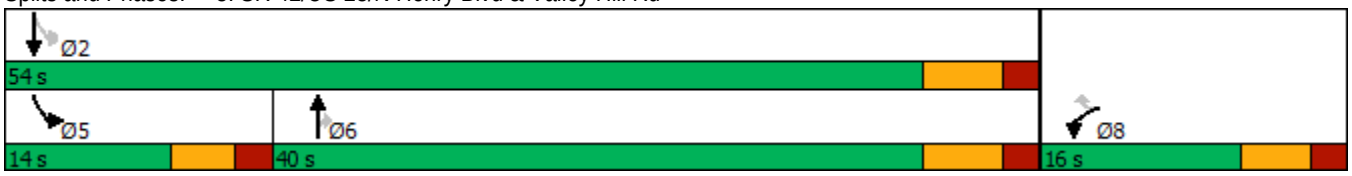
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	74	220	612	26	118	306
Future Volume (vph)	74	220	612	26	118	306
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	40.0	40.0	14.0	54.0
Total Split (%)	22.9%	22.9%	57.1%	57.1%	20.0%	77.1%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.3	10.3	31.8	31.8	43.0	42.2
Actuated g/C Ratio	0.16	0.16	0.49	0.49	0.67	0.65
v/c Ratio	0.28	0.52	0.85	0.03	0.28	0.32
Control Delay	29.5	9.1	28.6	4.4	5.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	9.1	28.6	4.4	5.1	5.5
LOS	C	A	C	A	A	A
Approach Delay	14.3		27.6			5.4
Approach LOS	B		C			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	78	232	644	27	124	322
v/c Ratio	0.28	0.52	0.85	0.03	0.28	0.32
Control Delay	29.5	9.1	28.6	4.4	5.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	9.1	28.6	4.4	5.1	5.5
Queue Length 50th (ft)	30	0	228	0	14	45
Queue Length 95th (ft)	67	57	#437	12	28	79
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	292	454	829	861	455	1163
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.51	0.78	0.03	0.27	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	589	17	977	4	40	1	16	1	1	5
Future Volume (vph)	2	589	17	977	4	40	1	16	1	1	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	14.0	92.0	14.0	92.0	92.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	70.8%	10.8%	70.8%	70.8%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	107.7	105.7	109.0	108.1	108.1		10.1	10.1		10.1	10.1
Actuated g/C Ratio	0.83	0.81	0.84	0.83	0.83		0.08	0.08		0.08	0.08
v/c Ratio	0.00	0.26	0.03	0.40	0.00		0.41	0.09		0.02	0.03
Control Delay	1.0	2.0	1.0	1.8	0.0		68.1	0.9		53.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	1.0	2.0	1.0	1.8	0.0		68.1	0.9		53.5	0.2
LOS	A	A	A	A	A		E	A		D	A
Approach Delay		2.0		1.7			49.1			15.4	
Approach LOS		A		A			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 36 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 3.5	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2	658	18	1028	4	43	17	2	5
v/c Ratio	0.00	0.26	0.03	0.40	0.00	0.41	0.09	0.02	0.03
Control Delay	1.0	2.0	1.0	1.8	0.0	68.1	0.9	53.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.0	2.0	1.0	1.8	0.0	68.1	0.9	53.5	0.2
Queue Length 50th (ft)	0	15	1	37	0	35	0	2	0
Queue Length 95th (ft)	m0	18	m1	26	m0	74	0	10	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	493	2507	685	2564	1330	176	276	201	276
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	4	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.26	0.03	0.40	0.00	0.24	0.06	0.01	0.02

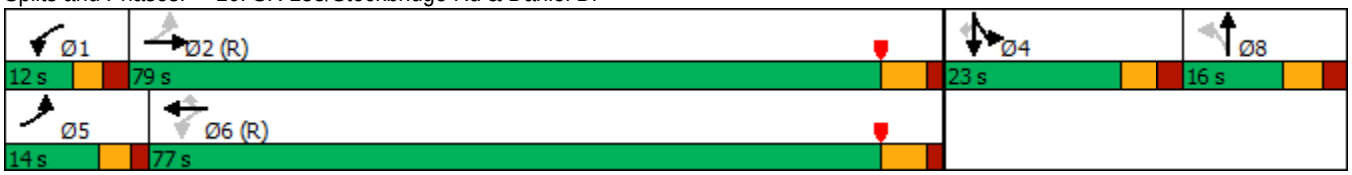
Intersection Summary

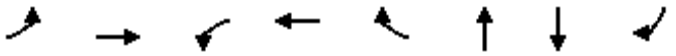
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	86	614	11	999	29	14	4	7	135
Future Volume (vph)	86	614	11	999	29	14	4	7	135
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	14.0	79.0	12.0	77.0	77.0	16.0	16.0	23.0	23.0
Total Split (%)	10.8%	60.8%	9.2%	59.2%	59.2%	12.3%	12.3%	17.7%	17.7%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	99.5	94.8	94.0	87.1	87.1		8.5	9.2	9.2
Actuated g/C Ratio	0.77	0.73	0.72	0.67	0.67		0.07	0.07	0.07
v/c Ratio	0.23	0.32	0.02	0.50	0.03		0.24	0.31	0.58
Control Delay	5.4	5.6	2.1	3.9	0.0		52.7	63.2	18.9
Queue Delay	0.0	0.0	0.0	0.1	0.0		0.0	0.0	0.1
Total Delay	5.4	5.6	2.1	4.0	0.0		52.7	63.2	19.0
LOS	A	A	A	A	A		D	E	B
Approach Delay		5.5		3.9			52.7	28.7	
Approach LOS		A		A			D	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	89	663	11	1030	30	24	39	139
v/c Ratio	0.23	0.32	0.02	0.50	0.03	0.24	0.31	0.58
Control Delay	5.4	5.6	2.1	3.9	0.0	52.7	63.2	18.9
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Total Delay	5.4	5.6	2.1	4.0	0.0	52.7	63.2	19.0
Queue Length 50th (ft)	19	88	1	71	0	15	32	0
Queue Length 95th (ft)	m23	57	m2	52	0	44	68	64
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	412	2094	592	2067	1101	113	234	327
Starvation Cap Reductn	0	0	0	154	0	0	0	0
Spillback Cap Reductn	0	0	0	193	0	0	0	8
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.32	0.02	0.55	0.03	0.21	0.17	0.44

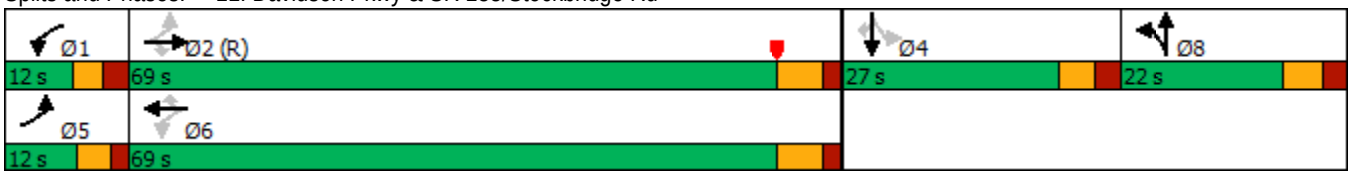
Intersection Summary

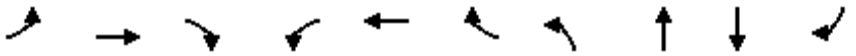
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	683	175	12	1061	53	222	11	20	12	95
Future Volume (vph)	76	683	175	12	1061	53	222	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	22.0	22.0	27.0	27.0	27.0
Total Split (%)	9.2%	53.1%	53.1%	9.2%	53.1%	53.1%	16.9%	16.9%	20.8%	20.8%	20.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	80.7	76.6	76.6	76.3	69.4	69.4	13.9	13.9		16.2	16.2
Actuated g/C Ratio	0.62	0.59	0.59	0.59	0.53	0.53	0.11	0.11		0.12	0.12
v/c Ratio	0.30	0.43	0.18	0.03	0.73	0.06	0.73	0.70		0.74	0.32
Control Delay	15.4	23.6	7.2	4.7	23.9	1.2	78.9	74.4		123.8	6.6
Queue Delay	0.0	0.2	0.0	0.0	1.6	0.0	0.0	0.0		0.0	0.0
Total Delay	15.4	23.8	7.2	4.7	25.5	1.2	78.9	74.4		123.8	6.6
LOS	B	C	A	A	C	A	E	E		F	A
Approach Delay		20.0			24.1			76.7		36.4	
Approach LOS		B			C			E		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	719	184	13	1117	56	131	128	34	100
v/c Ratio	0.30	0.43	0.18	0.03	0.73	0.06	0.73	0.70	0.74	0.32
Control Delay	15.4	23.6	7.2	4.7	23.9	1.2	78.9	74.4	123.8	6.6
Queue Delay	0.0	0.2	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	23.8	7.2	4.7	25.5	1.2	78.9	74.4	123.8	6.6
Queue Length 50th (ft)	33	223	28	2	493	1	112	106	28	0
Queue Length 95th (ft)	72	347	98	m3	576	13	#194	178	#80	30
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	267	1687	1008	442	1528	902	203	205	60	362
Starvation Cap Reductn	0	295	0	0	234	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	10	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.52	0.18	0.03	0.86	0.06	0.65	0.62	0.57	0.28

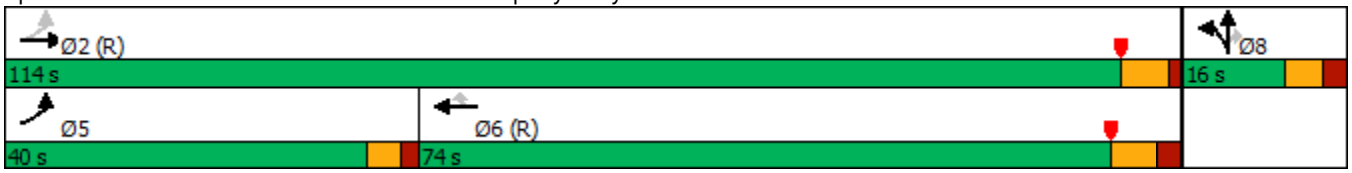
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	453	806	1094	298	0	118
Future Volume (vph)	453	806	1094	298	0	118
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	110.2	109.2	75.0	75.0	8.7	8.7
Actuated g/C Ratio	0.85	0.84	0.58	0.58	0.07	0.07
v/c Ratio	0.87	0.36	0.72	0.31	0.32	0.57
Control Delay	33.5	4.6	8.6	1.6	65.1	19.8
Queue Delay	0.0	0.0	0.3	0.3	0.0	0.0
Total Delay	33.5	4.6	8.9	1.9	65.1	19.8
LOS	C	A	A	A	E	B
Approach Delay		15.0	7.4		30.2	
Approach LOS		B	A		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





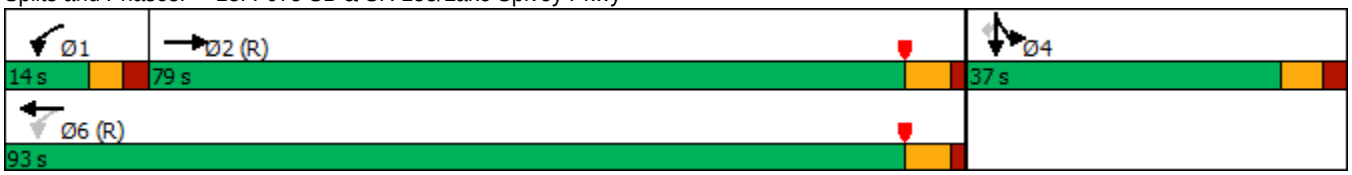
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	492	876	1189	324	38	128
v/c Ratio	0.87	0.36	0.72	0.31	0.32	0.57
Control Delay	33.5	4.6	8.6	1.6	65.1	19.8
Queue Delay	0.0	0.0	0.3	0.3	0.0	0.0
Total Delay	33.5	4.6	8.9	1.9	65.1	19.8
Queue Length 50th (ft)	271	3	117	12	31	0
Queue Length 95th (ft)	433	235	184	22	68	62
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	645	2406	1652	1050	134	238
Starvation Cap Reductn	0	0	112	291	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.36	0.77	0.43	0.28	0.54

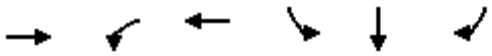
Intersection Summary

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1112	111	1024	159	0	440
Future Volume (vph)	1112	111	1024	159	0	440
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	76.6	89.8	89.8	27.8	27.8	27.8
Actuated g/C Ratio	0.59	0.69	0.69	0.21	0.21	0.21
v/c Ratio	0.76	0.48	0.57	0.24	0.25	0.81
Control Delay	16.0	11.0	4.4	43.1	43.2	59.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	11.0	4.4	43.1	43.2	59.9
LOS	B	B	A	D	D	E
Approach Delay	16.0		5.0		55.5	
Approach LOS	B		A		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1289	122	1125	87	88	484
v/c Ratio	0.76	0.48	0.57	0.24	0.25	0.81
Control Delay	16.0	11.0	4.4	43.1	43.2	59.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	11.0	4.4	43.1	43.2	59.9
Queue Length 50th (ft)	307	1	55	64	64	219
Queue Length 95th (ft)	261	m27	2	113	113	286
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1703	264	1986	398	398	660
Starvation Cap Reductn	1	0	0	0	0	0
Spillback Cap Reductn	0	0	31	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.46	0.58	0.22	0.22	0.73

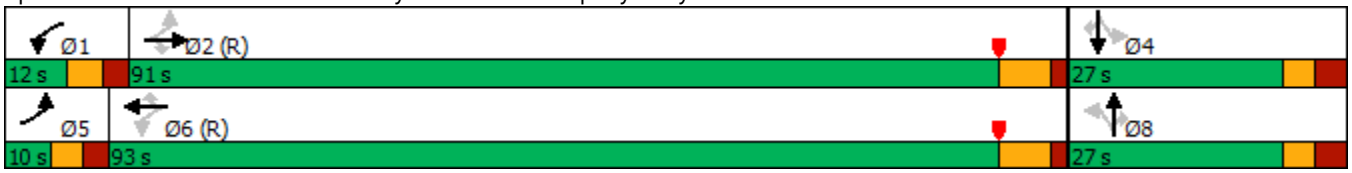
Intersection Summary

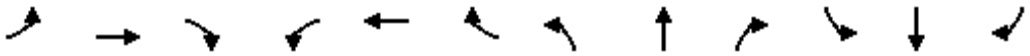
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1020	27	92	1314	47	22	3	79	91	9	63
Future Volume (vph)	32	1020	27	92	1314	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	95.4	89.0	89.0	99.8	94.7	94.7	15.4	15.4	15.4	15.4	15.4	15.4
Actuated g/C Ratio	0.73	0.68	0.68	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.13	0.51	0.03	0.28	0.62	0.04	0.15	0.01	0.33	0.60	0.05	0.27
Control Delay	2.4	5.0	0.0	2.6	5.5	0.9	51.0	47.3	13.1	68.6	48.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	5.0	0.0	2.6	5.6	0.9	51.0	47.3	13.1	68.6	48.2	10.3
LOS	A	A	A	A	A	A	D	D	B	E	D	B
Approach Delay		4.8			5.3			22.0			45.0	
Approach LOS		A			A			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	1121	30	101	1444	52	24	3	87	100	10	69
v/c Ratio	0.13	0.51	0.03	0.28	0.62	0.04	0.15	0.01	0.33	0.60	0.05	0.27
Control Delay	2.4	5.0	0.0	2.6	5.5	0.9	51.0	47.3	13.1	68.6	48.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	5.0	0.0	2.6	5.6	0.9	51.0	47.3	13.1	68.6	48.2	10.3
Queue Length 50th (ft)	1	120	0	2	216	1	18	2	0	81	8	0
Queue Length 95th (ft)	m2	122	m0	m20	425	m6	44	12	48	136	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	260	2202	1114	366	2339	1179	223	297	326	225	297	320
Starvation Cap Reductn	0	0	0	0	168	0	0	0	0	0	0	0
Spillback Cap Reductn	0	11	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.51	0.03	0.28	0.67	0.04	0.11	0.01	0.27	0.44	0.03	0.22

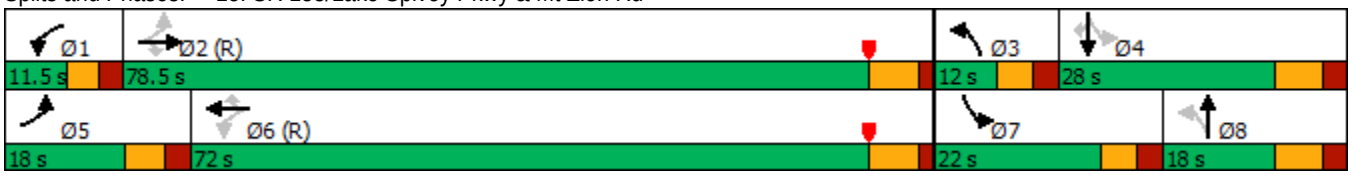
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	137	860	84	31	1141	198	76	28	197	27	230
Future Volume (vph)	137	860	84	31	1141	198	76	28	197	27	230
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	86.2	79.7	79.7	77.8	70.9	70.9	15.5	9.5	31.0	17.1	17.1
Actuated g/C Ratio	0.66	0.61	0.61	0.60	0.55	0.55	0.12	0.07	0.24	0.13	0.13
v/c Ratio	0.56	0.48	0.09	0.09	0.71	0.22	0.45	0.40	0.68	0.12	0.69
Control Delay	20.8	12.3	0.6	3.7	14.1	1.6	49.6	39.1	54.0	48.5	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	12.3	0.6	3.7	14.1	1.6	49.6	39.1	54.0	48.5	26.4
LOS	C	B	A	A	B	A	D	D	D	D	C
Approach Delay		12.5			12.1			45.1		39.7	
Approach LOS		B			B			D		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	149	935	91	34	1240	215	83	63	214	29	250
v/c Ratio	0.56	0.48	0.09	0.09	0.71	0.22	0.45	0.40	0.68	0.12	0.69
Control Delay	20.8	12.3	0.6	3.7	14.1	1.6	49.6	39.1	54.0	48.5	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	12.3	0.6	3.7	14.1	1.6	49.6	39.1	54.0	48.5	26.4
Queue Length 50th (ft)	24	253	3	3	462	23	55	24	154	21	55
Queue Length 95th (ft)	50	410	8	m6	86	2	100	71	232	51	147
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	291	1958	1040	363	1741	969	184	174	315	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.48	0.09	0.09	0.71	0.22	0.45	0.36	0.68	0.10	0.62

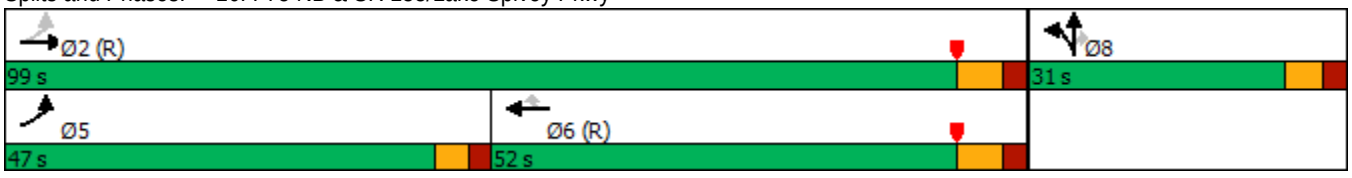
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	558	980	859	624	0	177
Future Volume (vph)	558	980	859	624	0	177
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	95.7	94.3	48.9	48.9	22.7	22.7
Actuated g/C Ratio	0.74	0.73	0.38	0.38	0.17	0.17
v/c Ratio	0.94	0.47	0.79	0.76	0.89	0.49
Control Delay	47.1	9.7	27.8	9.3	81.0	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	9.7	27.8	9.3	81.0	17.8
LOS	D	A	C	A	F	B
Approach Delay		23.3	20.0		54.7	
Approach LOS		C	C		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 98.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	613	1077	944	686	274	195
v/c Ratio	0.94	0.47	0.79	0.76	0.89	0.49
Control Delay	47.1	9.7	27.8	9.3	81.0	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	9.7	27.8	9.3	81.0	17.8
Queue Length 50th (ft)	393	118	209	0	223	34
Queue Length 95th (ft)	#633	424	423	121	#360	107
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	673	2316	1200	900	339	422
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.47	0.79	0.76	0.81	0.46

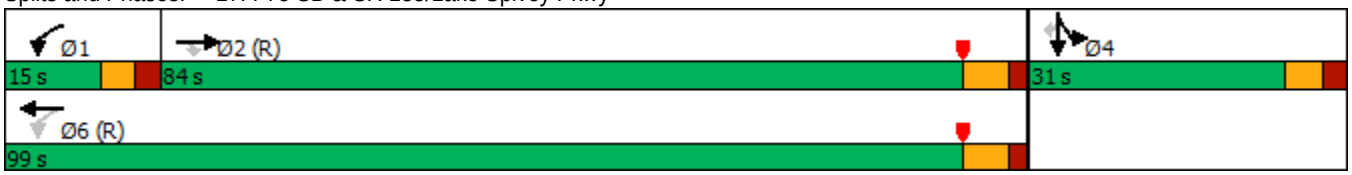
Intersection Summary

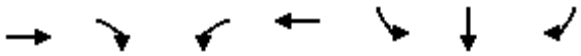
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1230	265	96	972	321	0	218
Future Volume (vph)	1230	265	96	972	321	0	218
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	85.0	85.0	98.8	98.3	19.2	19.2	19.2
Actuated g/C Ratio	0.65	0.65	0.76	0.76	0.15	0.15	0.15
v/c Ratio	0.66	0.26	0.38	0.45	0.72	0.72	0.67
Control Delay	11.6	1.2	6.7	0.6	68.6	68.9	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	1.2	6.7	0.6	68.6	68.9	29.2
LOS	B	A	A	A	E	E	C
Approach Delay	9.7			1.2		52.8	
Approach LOS	A			A		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 98.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1367	294	107	1080	178	179	242
v/c Ratio	0.66	0.26	0.38	0.45	0.72	0.72	0.67
Control Delay	11.6	1.2	6.7	0.6	68.6	68.9	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	1.2	6.7	0.6	68.6	68.9	29.2
Queue Length 50th (ft)	242	0	5	0	151	152	72
Queue Length 95th (ft)	m275	m7	m11	0	227	229	159
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	2087	1136	297	2416	320	320	422
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.26	0.36	0.45	0.56	0.56	0.57

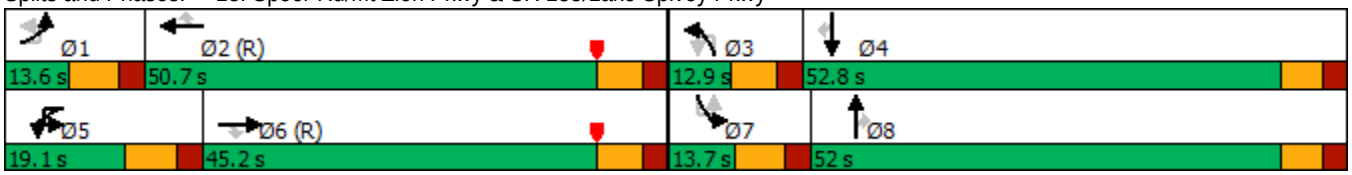
Intersection Summary

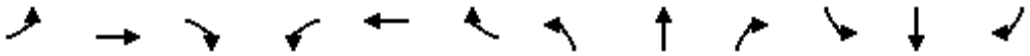
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	723	60	201	782	113	57	157	576	117	67	54
Future Volume (vph)	65	723	60	201	782	113	57	157	576	117	67	54
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.1	38.4	38.4	11.8	46.8	46.8	6.0	44.6	44.6	6.6	48.3	48.3
Actuated g/C Ratio	0.05	0.30	0.30	0.09	0.36	0.36	0.05	0.34	0.34	0.05	0.37	0.37
v/c Ratio	0.44	0.86	0.11	0.88	0.75	0.19	0.40	0.14	0.98	0.74	0.06	0.09
Control Delay	72.6	51.5	2.8	102.8	28.1	1.0	68.0	29.6	63.5	85.7	27.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.6	51.5	2.8	102.8	28.1	1.0	68.0	29.6	63.5	85.7	27.6	0.2
LOS	E	D	A	F	C	A	E	C	E	F	C	A
Approach Delay		49.7			41.3			57.1			50.0	
Approach LOS		D			D			E			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 48.5	Intersection LOS: D
Intersection Capacity Utilization 91.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	71	795	66	267	859	124	63	173	633	129	74	59
v/c Ratio	0.44	0.86	0.11	0.88	0.75	0.19	0.40	0.14	0.98	0.74	0.06	0.09
Control Delay	72.6	51.5	2.8	102.8	28.1	1.0	68.0	29.6	63.5	85.7	27.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.6	51.5	2.8	102.8	28.1	1.0	68.0	29.6	63.5	85.7	27.6	0.2
Queue Length 50th (ft)	31	358	2	123	247	1	27	52	424	56	21	0
Queue Length 95th (ft)	57	#451	13	#201	324	8	52	80	#681	#109	39	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	161	920	574	305	1150	666	158	1235	653	174	1314	685
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.86	0.11	0.88	0.75	0.19	0.40	0.14	0.97	0.74	0.06	0.09

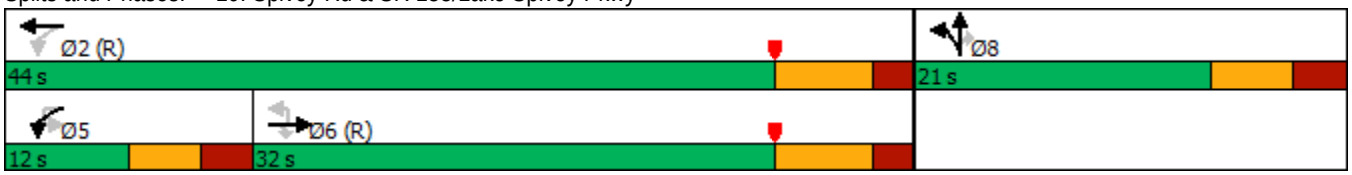
Intersection Summary

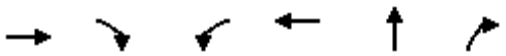
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	585	12	79	774	0	252
Future Volume (vph)	585	12	79	774	0	252
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	32.0	32.0	12.0	44.0	21.0	21.0
Total Split (%)	49.2%	49.2%	18.5%	67.7%	32.3%	32.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	32.2	32.2	43.0	42.2	9.3	9.3
Actuated g/C Ratio	0.50	0.50	0.66	0.65	0.14	0.14
v/c Ratio	0.42	0.02	0.18	0.43	0.12	0.60
Control Delay	13.0	0.0	3.1	7.4	24.2	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	0.0	3.1	7.4	24.2	9.5
LOS	B	A	A	A	C	A
Approach Delay	12.7			7.0	10.9	
Approach LOS	B			A	B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 33 (51%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	650	13	88	860	30	280
v/c Ratio	0.42	0.02	0.18	0.43	0.12	0.60
Control Delay	13.0	0.0	3.1	7.4	24.2	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	0.0	3.1	7.4	24.2	9.5
Queue Length 50th (ft)	84	0	6	30	11	0
Queue Length 95th (ft)	148	0	m19	430	29	55
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1539	843	501	2019	385	563
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.02	0.18	0.43	0.08	0.50

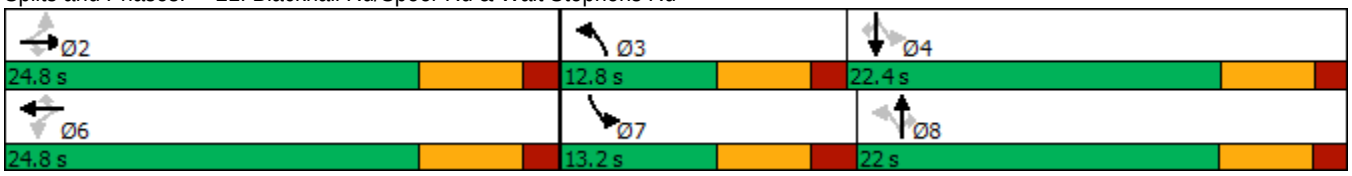
Intersection Summary

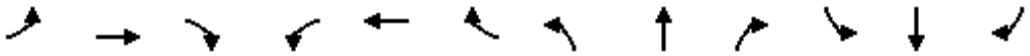
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	200	43	88	238	465	38	291	74	153	61	12
Future Volume (vph)	25	200	43	88	238	465	38	291	74	153	61	12
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	19.2	14.0	14.0	21.3	19.3	19.3
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.36	0.26	0.26	0.40	0.36	0.36
v/c Ratio	0.08	0.37	0.08	0.27	0.45	0.62	0.08	0.68	0.16	0.41	0.10	0.02
Control Delay	15.6	18.1	0.3	18.0	19.1	6.5	8.8	27.1	0.9	12.4	14.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	18.1	0.3	18.0	19.1	6.5	8.8	27.1	0.9	12.4	14.5	0.1
LOS	B	B	A	B	B	A	A	C	A	B	B	A
Approach Delay		15.0			11.6			20.6			12.3	
Approach LOS		B			B			C			B	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd





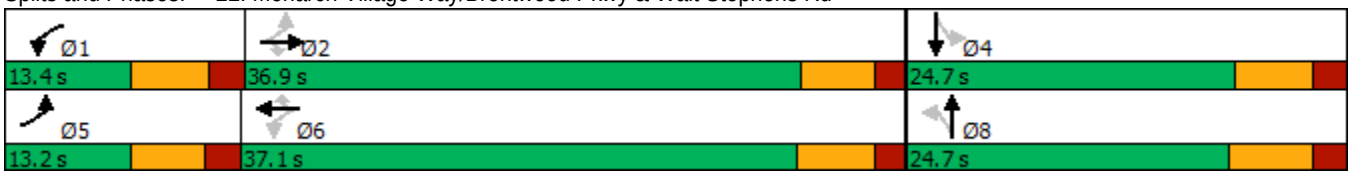
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	28	225	48	99	267	522	43	327	83	172	69	13
v/c Ratio	0.08	0.37	0.08	0.27	0.45	0.62	0.08	0.68	0.16	0.41	0.10	0.02
Control Delay	15.6	18.1	0.3	18.0	19.1	6.5	8.8	27.1	0.9	12.4	14.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	18.1	0.3	18.0	19.1	6.5	8.8	27.1	0.9	12.4	14.5	0.1
Queue Length 50th (ft)	7	62	0	26	75	9	8	104	0	33	12	0
Queue Length 95th (ft)	23	114	0	60	135	72	21	178	3	63	44	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	380	662	663	405	655	870	532	580	606	421	735	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.34	0.07	0.24	0.41	0.60	0.08	0.56	0.14	0.41	0.09	0.02

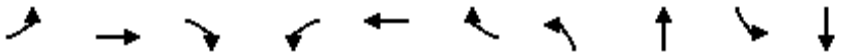
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	26	301	68	93	546	43	187	29	62	36
Future Volume (vph)	26	301	68	93	546	43	187	29	62	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	36.9	36.9	13.4	37.1	37.1	24.7	24.7	24.7	24.7
Total Split (%)	17.6%	49.2%	49.2%	17.9%	49.5%	49.5%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	27.4	22.4	22.4	29.9	28.0	28.0	15.1	15.1	15.4	15.4
Actuated g/C Ratio	0.45	0.37	0.37	0.49	0.46	0.46	0.25	0.25	0.25	0.25
v/c Ratio	0.08	0.50	0.11	0.21	0.73	0.06	0.70	0.34	0.23	0.30
Control Delay	7.4	19.0	0.7	8.3	22.1	0.1	38.4	9.1	23.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	19.0	0.7	8.3	22.1	0.1	38.4	9.1	23.6	10.3
LOS	A	B	A	A	C	A	D	A	C	B
Approach Delay		15.1			18.8			25.1		14.6
Approach LOS		B			B			C		B

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 60.9	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 74.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	342	77	106	620	49	213	176	70	149
v/c Ratio	0.08	0.50	0.11	0.21	0.73	0.06	0.70	0.34	0.23	0.30
Control Delay	7.4	19.0	0.7	8.3	22.1	0.1	38.4	9.1	23.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	19.0	0.7	8.3	22.1	0.1	38.4	9.1	23.6	10.3
Queue Length 50th (ft)	5	105	0	18	149	0	70	9	20	11
Queue Length 95th (ft)	15	174	3	39	#409	0	#184	56	58	56
Internal Link Dist (ft)		2243			6582			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	374	1005	920	504	1001	917	386	610	383	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.34	0.08	0.21	0.62	0.05	0.55	0.29	0.18	0.25

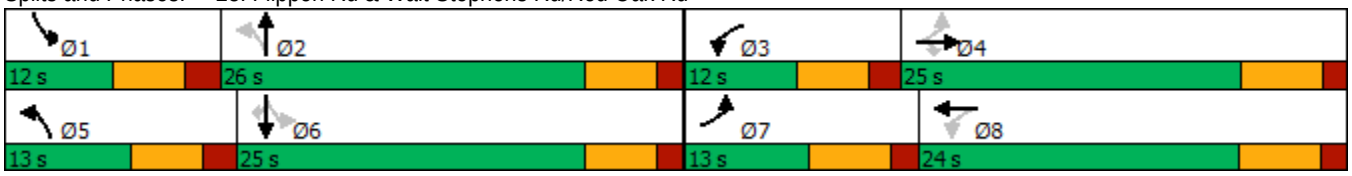
Intersection Summary

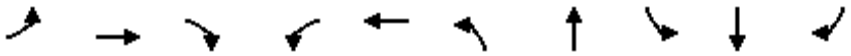
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	166	129	336	16	140	248	283	17	223	141
Future Volume (vph)	166	129	336	16	140	248	283	17	223	141
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	23.9	22.8	22.8	18.1	11.7	27.1	26.3	20.9	15.3	15.3
Actuated g/C Ratio	0.37	0.35	0.35	0.28	0.18	0.42	0.40	0.32	0.24	0.24
v/c Ratio	0.44	0.22	0.47	0.05	0.54	0.66	0.44	0.05	0.58	0.30
Control Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
LOS	B	B	A	B	C	C	B	B	C	A
Approach Delay		11.3			28.4		20.8		18.2	
Approach LOS		B			C		C		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 65	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	184	143	373	18	179	276	328	19	248	157
v/c Ratio	0.44	0.22	0.47	0.05	0.54	0.66	0.44	0.05	0.58	0.30
Control Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
Queue Length 50th (ft)	49	37	0	4	62	69	82	4	86	0
Queue Length 95th (ft)	98	101	63	16	123	#168	214	16	165	19
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	414	658	801	395	509	419	750	396	550	619
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.22	0.47	0.05	0.35	0.66	0.44	0.05	0.45	0.25

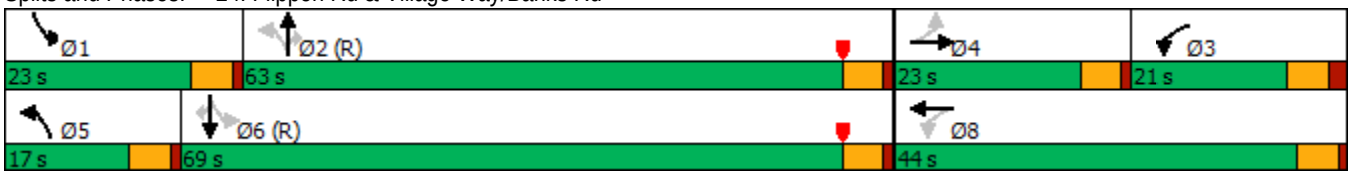
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	19	4	96	2	1	378	119	157	420	7
Future Volume (vph)	19	4	96	2	1	378	119	157	420	7
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	5.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	11.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	23.0	23.0	21.0	44.0	17.0	63.0	63.0	23.0	69.0	69.0
Total Split (%)	17.7%	17.7%	16.2%	33.8%	13.1%	48.5%	48.5%	17.7%	53.1%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	21.0	22.0	92.1	82.1	82.1	97.6	95.0	95.0
Actuated g/C Ratio		0.12	0.16	0.17	0.71	0.63	0.63	0.75	0.73	0.73
v/c Ratio		0.35	0.42	0.35	0.00	0.36	0.13	0.26	0.35	0.01
Control Delay		52.7	52.9	10.0	5.0	13.4	1.6	6.0	8.7	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		52.7	52.9	10.0	5.0	13.4	1.6	6.0	8.7	0.0
LOS		D	D	B	A	B	A	A	A	A
Approach Delay		52.7		29.3		10.6			7.8	
Approach LOS		D		C		B			A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





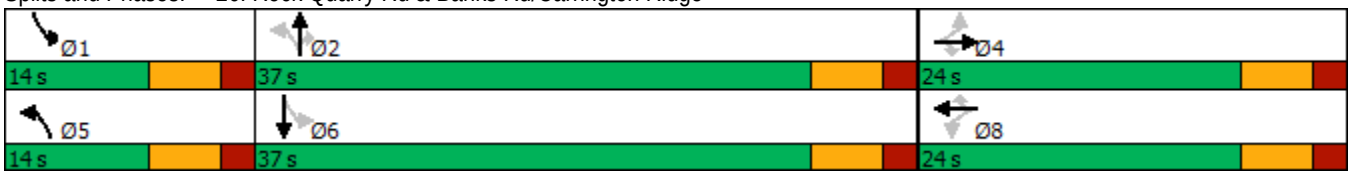
Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	108	133	1	425	134	176	472	8
v/c Ratio	0.35	0.42	0.35	0.00	0.36	0.13	0.26	0.35	0.01
Control Delay	52.7	52.9	10.0	5.0	13.4	1.6	6.0	8.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	52.9	10.0	5.0	13.4	1.6	6.0	8.7	0.0
Queue Length 50th (ft)	20	79	1	0	175	0	41	134	0
Queue Length 95th (ft)	55	133	54	2	254	20	65	273	0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	115	340	572	753	1188	1046	742	1361	1210
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.32	0.23	0.00	0.36	0.13	0.24	0.35	0.01

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	85	11	227	57	23	11	124	363	18	3	546
Future Volume (vph)	85	11	227	57	23	11	124	363	18	3	546
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4			8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	4	4	4	8	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	15.0	6.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	24.0	14.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	37.0	37.0	14.0	37.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	18.7%	49.3%	49.3%	18.7%	49.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)		11.6	11.6		11.6	11.6	37.9	36.5	36.5	32.8	28.4
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.60	0.58	0.58	0.52	0.45
v/c Ratio		0.45	0.50		0.35	0.03	0.35	0.38	0.02	0.00	0.82
Control Delay		32.0	7.7		29.2	0.2	7.8	9.7	0.1	5.7	27.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		32.0	7.7		29.2	0.2	7.8	9.7	0.1	5.7	27.1
LOS		C	A		C	A	A	A	A	A	C
Approach Delay		14.9			25.7			8.9			27.0
Approach LOS		B			C			A			C

Intersection Summary			
Cycle Length: 75			
Actuated Cycle Length: 62.8			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	105	249	88	12	136	399	20	3	662
v/c Ratio	0.45	0.50	0.35	0.03	0.35	0.38	0.02	0.00	0.82
Control Delay	32.0	7.7	29.2	0.2	7.8	9.7	0.1	5.7	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	7.7	29.2	0.2	7.8	9.7	0.1	5.7	27.1
Queue Length 50th (ft)	41	0	33	0	17	59	0	0	221
Queue Length 95th (ft)	84	54	72	0	46	202	0	3	#476
Internal Link Dist (ft)	1722		273			625			1560
Turn Bay Length (ft)		585		110	195		600	135	
Base Capacity (vph)	386	658	410	580	407	1170	987	653	936
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.38	0.21	0.02	0.33	0.34	0.02	0.00	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	893	592	239	495	357	358
Future Volume (veh/h)	893	592	239	495	357	358
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	971	643	260	538	388	389
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1250	557	280	1833	457	406
Arrive On Green	0.43	0.43	0.12	0.59	0.31	0.31
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	971	643	260	538	388	389
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	42.6	63.9	16.3	12.9	37.4	44.2
Cycle Q Clear(g_c), s	42.6	63.9	16.3	12.9	37.4	44.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1250	557	280	1833	457	406
V/C Ratio(X)	0.78	1.15	0.93	0.29	0.85	0.96
Avail Cap(c_a), veh/h	1250	557	318	1833	467	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	43.1	38.5	15.2	48.2	50.5
Incr Delay (d2), s/veh	4.8	88.1	30.8	0.4	14.1	33.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	33.0	11.9	4.5	14.8	31.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.7	131.2	69.3	15.6	62.3	83.7
LnGrp LOS	D	F	E	B	E	F
Approach Vol, veh/h	1614			798	777	
Approach Delay, s/veh	77.4			33.1	73.0	
Approach LOS	E			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.9		54.1	24.7	71.2
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		14.9		46.2	18.3	65.9
Green Ext Time (p_c), s		7.9		0.9	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1368	255	241	827	276	328
Future Volume (veh/h)	1368	255	241	827	276	328
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1425	266	251	861	288	342
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1797	961	342	2091	357	318
Arrive On Green	1.00	1.00	0.07	0.71	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	1425	266	251	861	288	342
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	0.0	0.0	7.7	17.9	23.1	30.1
Cycle Q Clear(g_c), s	0.0	0.0	7.7	17.9	23.1	30.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1797	961	342	2091	357	318
V/C Ratio(X)	0.79	0.28	0.73	0.41	0.81	1.08
Avail Cap(c_a), veh/h	1797	961	426	2091	357	318
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.7	8.8	57.2	59.9
Incr Delay (d2), s/veh	2.8	0.5	3.4	0.6	13.3	71.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	3.1	5.3	11.7	30.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.8	0.5	12.1	9.4	70.4	131.9
LnGrp LOS	A	A	B	A	E	F
Approach Vol, veh/h	1691			1112	630	
Approach Delay, s/veh	2.4			10.0	103.8	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	15.9	97.1
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		19.9		32.1	9.7	2.0
Green Ext Time (p_c), s		21.4		0.0	0.2	46.3

Intersection Summary		
HCM 6th Ctrl Delay		23.5
HCM 6th LOS		C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1624	20	8	1083	21	13
Future Volume (veh/h)	1624	20	8	1083	21	13
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	1657	20	8	1105	21	13
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2674	32	311	2643	45	40
Arrive On Green	1.00	1.00	1.00	1.00	0.03	0.03
Sat Flow, veh/h	3076	36	295	3040	1781	1585
Grp Volume(v), veh/h	818	859	8	1105	21	13
Grp Sat Flow(s),veh/h/ln	1481	1553	295	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	1.7	1.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	1.7	1.2
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1321	1385	311	2643	45	40
V/C Ratio(X)	0.62	0.62	0.03	0.42	0.47	0.32
Avail Cap(c_a), veh/h	1321	1385	311	2643	95	85
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	72.1	71.8
Incr Delay (d2), s/veh	1.1	1.0	0.1	0.4	7.3	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	0.2	0.9	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.1	1.0	0.1	0.4	79.5	76.5
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h	1677			1113	34	
Approach Delay, s/veh	1.1			0.4	78.3	
Approach LOS	A			A	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		140.2		9.8		140.2
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		129.6		8.0		129.6
Max Q Clear Time (g_c+I1), s		2.0		3.7		2.0
Green Ext Time (p_c), s		27.6		0.0		65.4

Intersection Summary		
HCM 6th Ctrl Delay		1.7
HCM 6th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1288	11	13	859	248	22	30	59	288	4	128
Future Volume (veh/h)	199	1288	11	13	859	248	22	30	59	288	4	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	1342	11	14	895	258	23	31	61	300	4	133
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	294	1746	14	144	1024	295	124	172	302	351	4	138
Arrive On Green	0.08	0.57	0.57	0.90	0.90	0.90	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1570	3040	25	403	2270	653	287	514	905	932	12	413
Grp Volume(v), veh/h	207	660	693	14	584	569	115	0	0	437	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1569	403	1481	1442	1705	0	0	1357	0	0
Q Serve(g_s), s	10.3	50.4	50.5	2.9	27.1	27.5	0.0	0.0	0.0	40.3	0.0	0.0
Cycle Q Clear(g_c), s	10.3	50.4	50.5	35.0	27.1	27.5	7.2	0.0	0.0	47.5	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.45	0.20		0.53	0.69		0.30
Lane Grp Cap(c), veh/h	294	859	901	144	669	651	598	0	0	493	0	0
V/C Ratio(X)	0.71	0.77	0.77	0.10	0.87	0.88	0.19	0.00	0.00	0.89	0.00	0.00
Avail Cap(c_a), veh/h	320	859	901	144	669	651	611	0	0	505	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.92	0.92	0.92	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.3	24.3	24.3	14.7	5.3	5.3	35.7	0.0	0.0	49.5	0.0	0.0
Incr Delay (d2), s/veh	1.2	1.2	1.2	1.2	13.7	14.2	0.2	0.0	0.0	16.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	17.6	18.4	0.3	4.7	4.7	3.1	0.0	0.0	18.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	25.6	25.5	16.0	19.0	19.6	35.9	0.0	0.0	66.4	0.0	0.0
LnGrp LOS	C	C	C	B	B	B	D	A	A	E	A	A
Approach Vol, veh/h		1560			1167			115			437	
Approach Delay, s/veh		25.4			19.3			35.9			66.4	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.5	74.8		56.7		93.3		56.7				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	15.0	63.9		51.3		84.9		51.3				
Max Q Clear Time (g_c+I1), s	12.3	37.0		49.5		52.5		9.2				
Green Ext Time (p_c), s	0.2	16.2		0.5		21.2		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		29.0
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1495	271	188	938	15	148	45	168	11	44	24
Future Volume (veh/h)	22	1495	271	188	938	15	148	45	168	11	44	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	1526	277	192	957	15	151	46	171	11	45	24
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	410	1550	275	204	2091	33	102	18	239	27	84	36
Arrive On Green	0.02	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2466	438	1795	3013	47	398	121	1585	0	560	240
Grp Volume(v), veh/h	22	885	918	192	475	497	197	0	171	80	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1451	1795	1495	1565	519	0	1585	800	0	0
Q Serve(g_s), s	0.7	86.8	94.3	11.9	21.4	21.4	0.0	0.0	15.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	86.8	94.3	11.9	21.4	21.4	22.6	0.0	15.4	22.6	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.03	0.77		1.00	0.14		0.30
Lane Grp Cap(c), veh/h	410	913	912	204	1038	1086	121	0	239	148	0	0
V/C Ratio(X)	0.05	0.97	1.01	0.94	0.46	0.46	1.63	0.00	0.72	0.54	0.00	0.00
Avail Cap(c_a), veh/h	443	913	912	204	1038	1086	121	0	239	148	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.25	0.25	0.25	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.6	26.5	27.9	56.3	10.3	10.3	67.7	0.0	60.6	57.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	23.1	31.4	19.1	0.4	0.3	319.7	0.0	12.1	7.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	32.8	37.2	8.1	6.8	7.1	15.4	0.0	7.0	3.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	49.6	59.3	75.4	10.7	10.6	387.4	0.0	72.7	64.2	0.0	0.0
LnGrp LOS	A	D	F	E	B	B	F	A	E	E	A	A
Approach Vol, veh/h		1825			1164			368			80	
Approach Delay, s/veh		54.0			21.3			241.2			64.2	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	110.8		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.7	23.4		24.6	13.9	96.3		24.6				
Green Ext Time (p_c), s	0.0	18.5		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	63.2
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	154.6

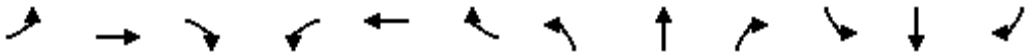
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	4	105	25	5	35	98	959	37	38	1630	78
Future Vol, veh/h	25	4	105	25	5	35	98	959	37	38	1630	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	26	4	109	26	5	36	102	999	39	40	1698	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2525	3061	890	2134	3062	500	1779	0	0	1038	0	0
Stage 1	1819	1819	-	1203	1203	-	-	-	-	-	-	-
Stage 2	706	1242	-	931	1859	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 14	12	286	28	12	516	345	-	-	665	-	-
Stage 1	80	127	-	196	256	-	-	-	-	-	-	-
Stage 2	393	245	-	287	122	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	8	286	~ 8	8	516	345	-	-	665	-	-
Mov Cap-2 Maneuver	~ 5	8	-	~ 8	8	-	-	-	-	-	-	-
Stage 1	56	119	-	138	180	-	-	-	-	-	-	-
Stage 2	250	172	-	161	115	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 2616.6	$ 1798.9	1.8	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	345	-	-	23	17	665	-	-
HCM Lane V/C Ratio	0.296	-	-	6.069	3.983	0.06	-	-
HCM Control Delay (s)	19.8	-	-	$ 2616.6	$ 1798.9	10.8	-	-
HCM Lane LOS	C	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	-	17.6	9.1	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	173	1077	125	172	126	621	360	71	70	579	124
Future Volume (veh/h)	231	173	1077	125	172	126	621	360	71	70	579	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	241	180	1122	130	179	131	647	375	74	73	603	129
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	312	233	1262	168	177	150	650	620	643	91	592	126
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.21	0.41	0.41	0.05	0.24	0.24
Sat Flow, veh/h	1041	777	2458	1781	1870	1585	3045	1530	1585	1781	2429	518
Grp Volume(v), veh/h	421	0	1122	130	179	131	647	375	74	73	367	365
Grp Sat Flow(s),veh/h/ln	1818	0	1229	1781	1870	1585	1522	1530	1585	1781	1481	1466
Q Serve(g_s), s	40.7	0.0	54.0	12.8	17.0	14.7	38.2	34.8	5.2	7.3	43.9	43.9
Cycle Q Clear(g_c), s	40.7	0.0	54.0	12.8	17.0	14.7	38.2	34.8	5.2	7.3	43.9	43.9
Prop In Lane	0.57		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	545	0	1262	168	177	150	650	620	643	91	361	357
V/C Ratio(X)	0.77	0.00	0.89	0.77	1.01	0.88	1.00	0.60	0.12	0.80	1.02	1.02
Avail Cap(c_a), veh/h	545	0	1262	168	177	150	650	620	643	145	361	357
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.00	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.1	0.0	46.7	79.6	81.5	80.5	70.7	42.1	33.4	84.5	68.1	68.1
Incr Delay (d2), s/veh	4.5	0.0	5.5	20.2	71.2	40.1	34.2	4.3	0.4	34.6	51.6	52.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.7	0.0	20.9	6.9	11.8	7.6	17.8	13.7	2.1	4.2	21.5	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	0.0	52.2	99.8	152.7	120.5	105.0	46.5	33.7	119.1	119.7	120.9
LnGrp LOS	E	A	D	F	F	F	F	D	C	F	F	F
Approach Vol, veh/h		1543			440			1096			805	
Approach Delay, s/veh		59.7			127.5			80.1			120.2	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	79.9		24.0	45.2	50.8		60.0				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	14.7	67.5		17.0	38.4	43.9		54.0				
Max Q Clear Time (g_c+I1), s	9.3	36.8		19.0	40.2	45.9		56.0				
Green Ext Time (p_c), s	0.1	5.1		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		85.7	
HCM 6th LOS		F	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	101	98	537	87	231	792
Future Volume (veh/h)	101	98	537	87	231	792
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	103	100	548	89	236	808
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	300	267	612	623	421	974
Arrive On Green	0.17	0.17	0.39	0.39	0.14	0.62
Sat Flow, veh/h	1781	1585	1559	1585	1781	1559
Grp Volume(v), veh/h	103	100	548	89	236	808
Grp Sat Flow(s),veh/h/ln	1781	1585	1559	1585	1781	1559
Q Serve(g_s), s	2.9	3.2	18.8	2.1	3.8	23.0
Cycle Q Clear(g_c), s	2.9	3.2	18.8	2.1	3.8	23.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	300	267	612	623	421	974
V/C Ratio(X)	0.34	0.37	0.89	0.14	0.56	0.83
Avail Cap(c_a), veh/h	325	289	651	662	445	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	21.0	16.2	11.1	11.0	8.3
Incr Delay (d2), s/veh	0.7	0.9	15.6	0.2	1.4	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.1	7.8	0.6	1.1	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.6	21.9	31.8	11.4	12.5	14.7
LnGrp LOS	C	C	C	B	B	B
Approach Vol, veh/h	203		637			1044
Approach Delay, s/veh	21.7		29.0			14.2
Approach LOS	C		C			B

Timer - Assigned Phs	2		5	6	8
Phs Duration (G+Y+Rc), s	41.8		13.2	28.6	15.2
Change Period (Y+Rc), s	6.2		5.4	6.2	5.6
Max Green Setting (Gmax), s	37.8		8.6	23.8	10.4
Max Q Clear Time (g_c+I1), s	25.0		5.8	20.8	5.2
Green Ext Time (p_c), s	7.2		0.2	1.6	0.3

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1589	55	41	978	25	69	5	71	10	7	24
Future Volume (veh/h)	23	1589	55	41	978	25	69	5	71	10	7	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	1673	58	43	1029	26	73	5	75	11	7	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	414	2285	79	300	2335	1182	39	1	193	32	13	193
Arrive On Green	0.05	1.00	1.00	0.03	0.75	0.75	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3088	107	1781	3131	1585	0	12	1585	0	109	1585
Grp Volume(v), veh/h	24	845	886	43	1029	26	78	0	75	18	0	25
Grp Sat Flow(s),veh/h/ln	1781	1566	1629	1781	1566	1585	12	0	1585	109	0	1585
Q Serve(g_s), s	0.6	0.0	0.0	1.0	22.4	0.8	0.0	0.0	7.9	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	1.0	22.4	0.8	21.9	0.0	7.9	21.9	0.0	2.5
Prop In Lane	1.00		0.07	1.00		1.00	0.94		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	414	1159	1205	300	2335	1182	40	0	193	45	0	193
V/C Ratio(X)	0.06	0.73	0.73	0.14	0.44	0.02	1.94	0.00	0.39	0.40	0.00	0.13
Avail Cap(c_a), veh/h	434	1159	1205	309	2335	1182	40	0	193	45	0	193
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.3	0.0	0.0	4.9	8.7	5.9	89.2	0.0	72.9	74.4	0.0	70.5
Incr Delay (d2), s/veh	0.0	2.4	2.4	0.0	0.1	0.0	502.4	0.0	1.3	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.4	7.0	0.2	7.5	0.0	3.3	0.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	2.4	2.4	4.9	8.7	5.9	591.7	0.0	74.2	79.9	0.0	70.8
LnGrp LOS	A	A	A	A	A	A	F	A	E	E	A	E
Approach Vol, veh/h		1755			1098			153			43	
Approach Delay, s/veh		2.5			8.5			338.0			74.6	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	140.0		29.0	10.0	141.0		29.0
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1
Max Green Setting (Gmax), s	* 6.3	* 1.3E2		21.9	* 6.2	* 1.3E2		21.9
Max Q Clear Time (g_c+I1), s	13.0	2.0		23.9	2.6	24.4		23.9
Green Ext Time (p_c), s	0.0	65.4		0.0	0.0	21.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	1563	28	9	1006	76	11	4	10	114	5	124
Future Volume (veh/h)	98	1563	28	9	1006	76	11	4	10	114	5	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	1595	29	9	1027	78	11	4	10	116	5	127
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	462	2113	38	283	2231	1129	24	9	22	157	7	145
Arrive On Green	0.07	1.00	1.00	0.02	1.00	1.00	0.03	0.03	0.03	0.09	0.09	0.09
Sat Flow, veh/h	1781	2892	53	1781	3131	1585	752	274	684	1711	74	1585
Grp Volume(v), veh/h	100	793	831	9	1027	78	25	0	0	121	0	127
Grp Sat Flow(s),veh/h/ln	1781	1439	1505	1781	1566	1585	1710	0	0	1785	0	1585
Q Serve(g_s), s	2.8	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	11.9	0.0	14.2
Cycle Q Clear(g_c), s	2.8	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	11.9	0.0	14.2
Prop In Lane	1.00		0.03	1.00		1.00	0.44		0.40	0.96		1.00
Lane Grp Cap(c), veh/h	462	1051	1100	283	2231	1129	54	0	0	164	0	145
V/C Ratio(X)	0.22	0.75	0.76	0.03	0.46	0.07	0.46	0.00	0.00	0.74	0.00	0.87
Avail Cap(c_a), veh/h	473	1051	1100	325	2231	1129	77	0	0	198	0	176
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.92	0.92	0.92	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.9	0.0	0.0	6.8	0.0	0.0	85.6	0.0	0.0	79.6	0.0	80.7
Incr Delay (d2), s/veh	0.0	0.5	0.5	0.0	0.6	0.1	6.0	0.0	0.0	11.1	0.0	31.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.1	0.1	0.1	0.2	0.0	1.3	0.0	0.0	6.0	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.9	0.5	0.5	6.8	0.6	0.1	91.6	0.0	0.0	90.7	0.0	111.8
LnGrp LOS	A	A	A	A	A	A	F	A	A	F	A	F
Approach Vol, veh/h		1724			1114			25			248	
Approach Delay, s/veh		0.8			0.6			91.6			101.5	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	137.8		22.5	11.0	134.5		12.0
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 1.2E2		20.0	7.0	* 1.2E2		8.1
Max Q Clear Time (g_c+I1), s	2.3	2.0		16.2	4.8	2.0		4.6
Green Ext Time (p_c), s	0.0	54.7		0.3	0.0	22.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1578	335	37	1024	61	223	28	43	70	27	188
Future Volume (veh/h)	165	1578	335	37	1024	61	223	28	43	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	1644	0	39	1067	64	153	140	45	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	421	1825		282	1804	993	116	88	28	180	69	219
Arrive On Green	0.08	1.00	0.00	0.06	1.00	1.00	0.06	0.06	0.06	0.14	0.14	0.14
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	1781	1356	436	1305	500	1585
Grp Volume(v), veh/h	172	1644	0	39	1067	64	153	0	185	101	0	196
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	0	1792	1805	0	1585
Q Serve(g_s), s	6.9	0.0	0.0	1.4	0.0	0.0	11.7	0.0	11.7	9.2	0.0	21.9
Cycle Q Clear(g_c), s	6.9	0.0	0.0	1.4	0.0	0.0	11.7	0.0	11.7	9.2	0.0	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	0.72		1.00
Lane Grp Cap(c), veh/h	421	1825		282	1804	993	116	0	116	250	0	219
V/C Ratio(X)	0.41	0.90		0.14	0.59	0.06	1.32	0.00	1.59	0.40	0.00	0.89
Avail Cap(c_a), veh/h	421	1825		295	1804	993	116	0	116	752	0	660
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.00	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	0.0	10.6	0.0	0.0	84.2	0.0	84.2	70.8	0.0	76.3
Incr Delay (d2), s/veh	0.3	3.8	0.0	0.2	0.7	0.1	192.6	0.0	301.4	1.1	0.0	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.0	0.0	0.5	0.2	0.0	11.7	0.0	15.2	4.4	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	3.8	0.0	10.8	0.7	0.1	276.8	0.0	385.6	71.8	0.0	88.2
LnGrp LOS	B	A		B	A	A	F	A	F	E	A	F
Approach Vol, veh/h		1816	A		1170			338			297	
Approach Delay, s/veh		4.5			1.0			336.3			82.7	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.6	120.5		30.9	12.0	119.1		18.0
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 63		75.0	7.0	* 63		11.7
Max Q Clear Time (g_c+I1), s	13.4	2.0		23.9	8.9	2.0		13.7
Green Ext Time (p_c), s	0.0	39.8		1.0	0.0	21.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	1908	0	0	1196	247	48	0	154	0	0	0
Future Volume (veh/h)	358	1908	0	0	1196	247	48	0	154	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	373	1988	0	0	1246	257	50	0	160			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	390	2347	0	0	1942	1070	199	0	177			
Arrive On Green	0.23	1.00	0.00	0.00	0.67	0.67	0.11	0.00	0.11			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	373	1988	0	0	1246	257	50	0	160			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	17.4	0.0	0.0	0.0	44.7	11.3	4.6	0.0	18.0			
Cycle Q Clear(g_c), s	17.4	0.0	0.0	0.0	44.7	11.3	4.6	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	390	2347	0	0	1942	1070	199	0	177			
V/C Ratio(X)	0.96	0.85	0.00	0.00	0.64	0.24	0.25	0.00	0.90			
Avail Cap(c_a), veh/h	545	2347	0	0	1942	1070	217	0	193			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.5	0.0	0.0	0.0	16.8	11.4	73.1	0.0	79.0			
Incr Delay (d2), s/veh	3.8	0.4	0.0	0.0	0.1	0.0	0.7	0.0	37.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	14.5	0.1	0.0	0.0	14.0	3.9	2.1	0.0	9.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	0.4	0.0	0.0	16.9	11.4	73.7	0.0	116.7			
LnGrp LOS	C	A	A	A	B	B	E	A	F			
Approach Vol, veh/h		2361			1503			210				
Approach Delay, s/veh		5.7			16.0			106.5				
Approach LOS		A			B			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		153.8			25.4	128.5		26.2				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			19.4	46.7		20.0				
Green Ext Time (p_c), s		92.3			1.0	30.3		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1823	58	96	1147	0	0	0	0	463	0	579
Future Volume (veh/h)	0	1823	58	96	1147	0	0	0	0	463	0	579
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1879	60	99	1182	0				477	0	597
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1877	60	105	2090	0				730	0	650
Arrive On Green	0.00	1.00	1.00	0.05	0.97	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2923	90	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	945	994	99	1182	0				477	0	597
Grp Sat Flow(s),veh/h/ln	0	1439	1498	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	109.8	5.4	5.6	0.0				22.1	0.0	33.2
Cycle Q Clear(g_c), s	0.0	0.0	109.8	5.4	5.6	0.0				22.1	0.0	33.2
Prop In Lane	0.00		0.06	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	949	988	105	2090	0				730	0	650
V/C Ratio(X)	0.00	1.00	1.01	0.94	0.57	0.00				0.65	0.00	0.92
Avail Cap(c_a), veh/h	0	949	988	105	2090	0				762	0	678
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.60	0.60	0.72	0.72	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	60.2	0.9	0.0				65.7	0.0	70.1
Incr Delay (d2), s/veh	0.0	21.6	23.7	56.2	0.8	0.0				2.0	0.0	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	6.5	6.1	1.0	0.0				10.2	0.0	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.6	23.7	116.4	1.7	0.0				67.7	0.0	87.5
LnGrp LOS	A	C	F	F	A	A				E	A	F
Approach Vol, veh/h		1939			1281						1074	
Approach Delay, s/veh		22.7			10.6						78.7	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	124.6		43.4		136.6
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	7.4	111.8		35.2		7.6
Green Ext Time (p_c), s	0.0	5.1		1.7		28.2

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1590	47	197	1424	95	65	23	197	85	17	46
Future Volume (veh/h)	45	1590	47	197	1424	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	1656	49	205	1483	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	308	2329	1138	324	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.06	0.99	0.99	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	1656	49	205	1483	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.3	0.0	0.0	5.7	2.3	0.1	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.3	0.0	0.0	5.7	2.3	0.1	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	2329	1138	324	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.15	0.71	0.04	0.63	0.61	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	326	2329	1138	474	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.2	0.0	0.0	5.5	0.3	0.2	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.5	0.7	0.1	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	0.0	1.9	0.5	0.1	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	1.1	0.0	6.0	1.0	0.3	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	A	A	A	A	A	E	E	F	E	E	E
Approach Vol, veh/h		1752			1787			297			155	
Approach Delay, s/veh		1.2			1.5			116.6			75.1	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.9	136.1		30.0	9.2	140.8		30.0
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24
Max Q Clear Time (g_c+I1), s	7.7	2.0		17.3	3.3	4.3		25.2
Green Ext Time (p_c), s	0.2	57.1		0.4	0.0	49.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	1258	168	47	1120	303	148	87	40	313	79	173
Future Volume (veh/h)	174	1258	168	47	1120	303	148	87	40	313	79	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	1338	179	50	1191	322	157	93	43	333	84	184
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	332	1828	893	276	1713	837	287	107	50	374	344	291
Arrive On Green	0.12	1.00	1.00	0.06	1.00	1.00	0.08	0.09	0.09	0.18	0.18	0.18
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	1781	1870	1585
Grp Volume(v), veh/h	185	1338	179	50	1191	322	157	0	136	333	84	184
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	8.8	0.0	0.0	2.3	0.0	0.0	14.4	0.0	13.7	29.9	6.9	19.3
Cycle Q Clear(g_c), s	8.8	0.0	0.0	2.3	0.0	0.0	14.4	0.0	13.7	29.9	6.9	19.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	332	1828	893	276	1713	837	287	0	157	374	344	291
V/C Ratio(X)	0.56	0.73	0.20	0.18	0.70	0.38	0.55	0.00	0.87	0.89	0.24	0.63
Avail Cap(c_a), veh/h	398	1828	893	282	1713	837	287	0	186	393	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.79	0.79	0.79	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	17.5	0.0	0.0	67.7	0.0	81.0	58.5	62.8	67.8
Incr Delay (d2), s/veh	1.0	1.8	0.3	0.2	1.9	1.1	2.2	0.0	33.9	21.0	0.8	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.5	0.1	0.9	0.4	0.2	6.8	0.0	7.8	15.6	3.4	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	1.8	0.3	17.7	1.9	1.1	69.8	0.0	114.9	79.5	63.6	73.2
LnGrp LOS	B	A	A	B	A	A	E	A	F	E	E	E
Approach Vol, veh/h		1702			1563			293			601	
Approach Delay, s/veh		3.2			2.2			90.7			75.3	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	107.8	21.0	40.2	17.4	101.5	38.1	23.1
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.3	2.0	16.4	21.3	10.8	2.0	31.9	15.7
Green Ext Time (p_c), s	0.0	38.8	0.0	1.9	0.3	34.1	0.2	0.3

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	1576	0	0	1089	417	191	0	139	0	0	0
Future Volume (veh/h)	233	1576	0	0	1089	417	191	0	139	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	253	1713	0	0	1184	0	208	0	151			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	476	2587	0	0	2306		232	0	206			
Arrive On Green	0.11	1.00	0.00	0.00	1.00	0.00	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	253	1713	0	0	1184	0	208	0	151			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	7.5	0.0	0.0	0.0	0.0	0.0	20.7	0.0	16.5			
Cycle Q Clear(g_c), s	7.5	0.0	0.0	0.0	0.0	0.0	20.7	0.0	16.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	476	2587	0	0	2306		232	0	206			
V/C Ratio(X)	0.53	0.66	0.00	0.00	0.51		0.90	0.00	0.73			
Avail Cap(c_a), veh/h	659	2587	0	0	2306		365	0	325			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.53	0.53	0.00	0.00	0.67	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	5.0	0.0	0.0	0.0	0.0	0.0	77.1	0.0	75.3			
Incr Delay (d2), s/veh	0.5	0.7	0.0	0.0	0.6	0.0	11.3	0.0	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.1	0.3	0.0	0.0	0.2	0.0	10.0	0.0	6.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	0.7	0.0	0.0	0.6	0.0	88.4	0.0	77.2			
LnGrp LOS	A	A	A	A	A		F	A	E			
Approach Vol, veh/h		1966			1184	A		359				
Approach Delay, s/veh		1.3			0.6			83.7				
Approach LOS		A			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		150.5			15.6	134.9		29.5				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			9.5	2.0		22.7				
Green Ext Time (p_c), s		63.0			0.6	26.8		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1084	239	140	1211	0	0	0	0	726	0	616
Future Volume (veh/h)	0	1084	239	140	1211	0	0	0	0	726	0	616
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1153	254	149	1288	0				772	0	655
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1358	664	187	1646	0				1507	0	671
Arrive On Green	0.00	0.56	0.56	0.02	0.17	0.00				0.42	0.00	0.42
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1153	254	149	1288	0				772	0	655
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	53.8	16.2	8.3	68.5	0.0				28.7	0.0	73.1
Cycle Q Clear(g_c), s	0.0	53.8	16.2	8.3	68.5	0.0				28.7	0.0	73.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1358	664	187	1646	0				1507	0	671
V/C Ratio(X)	0.00	0.85	0.38	0.80	0.78	0.00				0.51	0.00	0.98
Avail Cap(c_a), veh/h	0	1358	664	187	1646	0				1520	0	676
HCM Platoon Ratio	1.00	1.33	1.33	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.73	0.73	0.82	0.82	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	35.1	26.8	40.9	65.4	0.0				38.2	0.0	51.1
Incr Delay (d2), s/veh	0.0	5.1	1.2	17.8	3.1	0.0				0.3	0.0	28.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.0	5.8	4.7	30.7	0.0				12.3	0.0	33.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	40.2	28.0	58.7	68.5	0.0				38.5	0.0	79.7
LnGrp LOS	A	D	C	E	E	A				D	A	E
Approach Vol, veh/h		1407			1437						1427	
Approach Delay, s/veh		38.0			67.5						57.4	
Approach LOS		D			E						E	

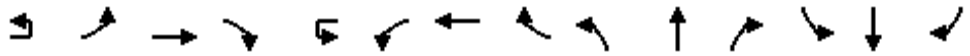
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	81.6		82.4		97.6
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	10.3	55.8		75.1		70.5
Green Ext Time (p_c), s	0.0	13.5		1.0		14.1

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



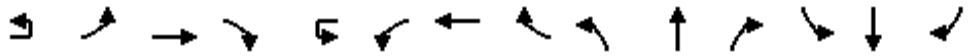
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	7	116	657	96	47	591	805	226	60	141	233	322	292	132
Future Volume (veh/h)	7	116	657	96	47	591	805	226	60	141	233	322	292	132
Initial Q (Qb), veh		0	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00		1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No				No			No			No	
Adj Sat Flow, veh/h/ln		1870	1663	1870		1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		122	692	101		622	847	238	63	148	245	339	307	139
Peak Hour Factor		0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		2	16	2		2	13	2	2	2	2	2	2	2
Cap, veh/h		159	1278	641		675	1797	878	110	462	206	384	754	336
Arrive On Green		0.09	0.81	0.81		0.33	0.92	0.92	0.03	0.13	0.13	0.11	0.21	0.21
Sat Flow, veh/h		3456	3159	1585		3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h		122	692	101		622	847	238	63	148	245	339	307	139
Grp Sat Flow(s),veh/h/ln		1728	1580	1585		1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s		6.2	13.4	2.5		31.2	6.3	2.7	3.2	6.8	23.4	17.4	13.4	13.6
Cycle Q Clear(g_c), s		6.2	13.4	2.5		31.2	6.3	2.7	3.2	6.8	23.4	17.4	13.4	13.6
Prop In Lane		1.00		1.00		1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h		159	1278	641		675	1797	878	110	462	206	384	754	336
V/C Ratio(X)		0.77	0.54	0.16		0.92	0.47	0.27	0.57	0.32	1.19	0.88	0.41	0.41
Avail Cap(c_a), veh/h		227	1278	641		893	1797	878	136	462	206	491	837	373
HCM Platoon Ratio		2.00	2.00	2.00		1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.91	0.91	0.91		0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		80.8	11.5	10.5		59.3	3.3	3.1	85.9	71.1	78.3	78.8	61.1	61.2
Incr Delay (d2), s/veh		8.7	1.5	0.5		6.1	0.4	0.3	4.6	0.4	123.0	14.2	0.4	0.8
Initial Q Delay(d3),s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.8	3.4	0.9		12.9	1.5	0.9	1.5	3.1	16.5	8.5	6.1	5.5
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh		89.4	13.0	10.9		65.4	3.6	3.4	90.5	71.5	201.3	93.0	61.5	62.0
LnGrp LOS		F	B	B		E	A	A	F	E	F	F	E	E
Approach Vol, veh/h			915				1707			456			785	
Approach Delay, s/veh			23.0				26.1			143.9			75.2	
Approach LOS			C				C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	106.8	12.6	44.8	42.6	79.9	27.4	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.3	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	8.2	8.3	5.2	15.6	33.2	15.4	19.4	25.4
Green Ext Time (p_c), s	0.1	18.9	0.0	2.3	1.9	11.1	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	0	0	664	44	35	274	680	0	15	0	155	0	0	0
Future Volume (veh/h)	0	0	664	44	35	274	680	0	15	0	155	0	0	0
Initial Q (Qb), veh		0	0	0		0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)		1.00		1.00		1.00		1.00	1.00		1.00			
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach			No				No			No				
Adj Sat Flow, veh/h/ln		0	1663	1870		1870	1663	0	1900	1900	1900			
Adj Flow Rate, veh/h		0	699	46		288	716	0	16	0	163			
Peak Hour Factor		0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %		0	16	2		2	16	0	0	0	0			
Cap, veh/h		0	1786	896		568	2301	0	220	0	196			
Arrive On Green		0.00	0.57	0.57		0.19	1.00	0.00	0.12	0.00	0.12			
Sat Flow, veh/h		0	3243	1585		1781	3243	0	1810	0	1610			
Grp Volume(v), veh/h		0	699	46		288	716	0	16	0	163			
Grp Sat Flow(s),veh/h/ln		0	1580	1585		1781	1580	0	1810	0	1610			
Q Serve(g_s), s		0.0	11.1	1.2		6.1	0.0	0.0	0.7	0.0	8.9			
Cycle Q Clear(g_c), s		0.0	11.1	1.2		6.1	0.0	0.0	0.7	0.0	8.9			
Prop In Lane		0.00		1.00		1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h		0	1786	896		568	2301	0	220	0	196			
V/C Ratio(X)		0.00	0.39	0.05		0.51	0.31	0.00	0.07	0.00	0.83			
Avail Cap(c_a), veh/h		0	1786	896		772	2301	0	288	0	256			
HCM Platoon Ratio		1.00	1.00	1.00		2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)		0.00	1.00	1.00		0.90	0.90	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh		0.0	10.9	8.8		6.2	0.0	0.0	35.0	0.0	38.6			
Incr Delay (d2), s/veh		0.0	0.6	0.1		0.6	0.3	0.0	0.1	0.0	16.2			
Initial Q Delay(d3),s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln		0.0	3.5	0.4		1.4	0.1	0.0	0.3	0.0	4.3			
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh		0.0	11.6	8.9		6.8	0.3	0.0	35.2	0.0	54.8			
LnGrp LOS		A	B	A		A	A	A	D	A	D			
Approach Vol, veh/h			745				1004			179				
Approach Delay, s/veh			11.4				2.2			53.1				
Approach LOS			B				A			D				

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	72.4		14.7	57.7		17.6
Change Period (Y+Rc), s	6.8		6.0	6.8		6.7
Max Green Setting (Gmax), s	62.2		19.0	37.2		14.3
Max Q Clear Time (g_c+I1), s	2.0		8.1	13.1		10.9
Green Ext Time (p_c), s	15.1		0.6	10.8		0.2

Intersection Summary	
HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

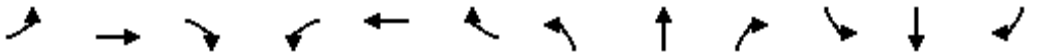
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	94	358	246	49	74	156
Future Vol, veh/h	94	358	246	49	74	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	104	398	273	54	82	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	327	0	-	0	906	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1244	-	-	-	307	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	545	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1244	-	-	-	274	740
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	545	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1244	-	-	-	478
HCM Lane V/C Ratio	0.084	-	-	-	0.535
HCM Control Delay (s)	8.2	0	-	-	20.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	3.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	349	64	92	250	230	35	142	78	535	346	15
Future Volume (veh/h)	24	349	64	92	250	230	35	142	78	535	346	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	353	65	93	253	232	35	143	79	540	349	15
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	259	500	423	213	500	423	381	312	264	702	720	610
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.05	0.17	0.17	0.26	0.39	0.39
Sat Flow, veh/h	918	1885	1598	976	1885	1598	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	24	353	65	93	253	232	35	143	79	540	349	15
Grp Sat Flow(s),veh/h/ln	918	1885	1598	976	1885	1598	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.4	10.2	1.9	5.7	6.8	7.5	0.9	4.1	2.6	14.0	8.5	0.4
Cycle Q Clear(g_c), s	8.2	10.2	1.9	15.9	6.8	7.5	0.9	4.1	2.6	14.0	8.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	500	423	213	500	423	381	312	264	702	720	610
V/C Ratio(X)	0.09	0.71	0.15	0.44	0.51	0.55	0.09	0.46	0.30	0.77	0.48	0.02
Avail Cap(c_a), veh/h	259	500	423	213	500	423	497	312	264	702	720	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	19.9	16.9	27.1	18.7	19.0	18.7	22.6	21.9	13.0	13.9	11.5
Incr Delay (d2), s/veh	0.3	5.7	0.4	3.0	1.7	2.6	0.1	1.1	0.6	5.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.6	0.6	1.4	2.8	2.7	0.3	1.7	0.9	5.2	3.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	25.6	17.3	30.1	20.4	21.6	18.8	23.6	22.6	18.2	14.5	11.5
LnGrp LOS	C	C	B	C	C	C	B	C	C	B	B	B
Approach Vol, veh/h		442			578			257			904	
Approach Delay, s/veh		24.2			22.5			22.6			16.6	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	8.9	28.9		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		12.2	2.9	10.5		17.9	16.0	6.1				
Green Ext Time (p_c), s		1.3	0.0	1.2		0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	757	102	28	431	97	82	15	40	75	15	63
Future Volume (veh/h)	83	757	102	28	431	97	82	15	40	75	15	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	765	103	28	435	98	83	15	40	76	15	64
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	542	974	825	305	903	765	251	68	181	273	47	199
Arrive On Green	0.08	0.52	0.52	0.04	0.48	0.48	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1795	1885	1598	1795	1885	1598	1320	451	1203	1349	310	1322
Grp Volume(v), veh/h	84	765	103	28	435	98	83	0	55	76	0	79
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	1885	1598	1320	0	1654	1349	0	1632
Q Serve(g_s), s	1.4	21.8	2.2	0.5	10.3	2.3	4.0	0.0	1.9	3.5	0.0	2.9
Cycle Q Clear(g_c), s	1.4	21.8	2.2	0.5	10.3	2.3	6.8	0.0	1.9	5.4	0.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.81
Lane Grp Cap(c), veh/h	542	974	825	305	903	765	251	0	249	273	0	246
V/C Ratio(X)	0.16	0.79	0.12	0.09	0.48	0.13	0.33	0.00	0.22	0.28	0.00	0.32
Avail Cap(c_a), veh/h	582	1312	1111	419	1312	1111	411	0	450	443	0	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	13.0	8.3	10.7	11.7	9.6	28.1	0.0	24.7	27.0	0.0	25.1
Incr Delay (d2), s/veh	0.0	3.6	0.1	0.0	0.9	0.2	0.8	0.0	0.4	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.8	0.6	0.2	3.6	0.7	1.3	0.0	0.8	1.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	16.6	8.4	10.7	12.5	9.7	28.9	0.0	25.1	27.6	0.0	25.8
LnGrp LOS	A	B	A	B	B	A	C	A	C	C	A	C
Approach Vol, veh/h		952			561			138			155	
Approach Delay, s/veh		14.9			11.9			27.4			26.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.2	40.3		16.7	11.7	37.8		16.7
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7
Max Green Setting (Gmax), s	7.6	* 46		* 18	7.0	* 46		18.0
Max Q Clear Time (g_c+I1), s	2.5	23.8		7.4	3.4	12.3		8.8
Green Ext Time (p_c), s	0.0	10.3		0.4	0.0	6.2		0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	230	460	35	128	27	334	313	29	44	456	208
Future Volume (veh/h)	183	230	460	35	128	27	334	313	29	44	456	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	197	247	495	38	138	29	359	337	31	47	490	224
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	269	312	264	153	176	37	454	817	75	498	748	634
Arrive On Green	0.09	0.17	0.17	0.04	0.12	0.12	0.09	0.32	0.32	0.05	0.40	0.40
Sat Flow, veh/h	1795	1885	1598	1795	1511	317	1781	1687	155	1795	1885	1598
Grp Volume(v), veh/h	197	247	495	38	0	167	359	0	368	47	490	224
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1828	1781	0	1842	1795	1885	1598
Q Serve(g_s), s	4.0	11.3	10.1	0.0	0.0	8.0	9.9	0.0	14.0	1.3	19.1	5.6
Cycle Q Clear(g_c), s	4.0	11.3	10.1	0.0	0.0	8.0	9.9	0.0	14.0	1.3	19.1	5.6
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	269	312	264	153	0	212	454	0	892	498	748	634
V/C Ratio(X)	0.73	0.79	1.87	0.25	0.00	0.79	0.79	0.00	0.41	0.09	0.65	0.35
Avail Cap(c_a), veh/h	269	390	330	204	0	364	474	0	892	535	748	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	0.00	1.00	0.83	0.00	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	36.1	17.4	41.4	0.0	38.7	16.9	0.0	20.4	14.6	22.1	7.7
Incr Delay (d2), s/veh	7.7	6.7	403.3	0.8	0.0	6.3	7.2	0.0	1.2	0.1	4.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	5.5	33.1	0.8	0.0	3.9	4.5	0.0	6.4	0.5	8.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.6	42.8	420.6	42.2	0.0	45.0	24.1	0.0	21.6	14.6	26.6	9.3
LnGrp LOS	D	D	F	D	A	D	C	A	C	B	C	A
Approach Vol, veh/h		939			205			727			761	
Approach Delay, s/veh		242.6			44.5			22.8			20.7	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	49.2	9.8	20.9	18.0	41.3	14.1	16.6
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	13.3	16.0	2.0	13.3	11.9	21.1	6.0	10.0
Green Ext Time (p_c), s	0.0	3.7	0.0	1.6	0.1	3.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	102.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	2	125	3	163	7	499	129	229	690	9
Future Volume (veh/h)	5	2	2	125	3	163	7	499	129	229	690	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1870	1900
Adj Flow Rate, veh/h	5	2	2	130	3	170	7	520	134	239	719	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	0	2	0
Cap, veh/h	62	6	2	294	5	311	394	993	848	554	1159	998
Arrive On Green	0.03	0.03	0.03	0.11	0.20	0.20	0.02	0.53	0.53	0.11	0.62	0.62
Sat Flow, veh/h	0	186	53	1810	28	1586	1810	1885	1610	1810	1870	1610
Grp Volume(v), veh/h	9	0	0	130	0	173	7	520	134	239	719	9
Grp Sat Flow(s),veh/h/ln	239	0	0	1810	0	1614	1810	1885	1610	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	8.7	0.2	16.2	2.1	4.7	21.4	0.2
Cycle Q Clear(g_c), s	3.0	0.0	0.0	0.8	0.0	8.7	0.2	16.2	2.1	4.7	21.4	0.2
Prop In Lane	0.56		0.22	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	0	0	294	0	316	394	993	848	554	1159	998
V/C Ratio(X)	0.13	0.00	0.00	0.44	0.00	0.55	0.02	0.52	0.16	0.43	0.62	0.01
Avail Cap(c_a), veh/h	259	0	0	322	0	556	563	993	848	555	1159	998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.60	0.60	0.60
Uniform Delay (d), s/veh	42.5	0.0	0.0	35.9	0.0	32.6	10.3	13.9	3.2	8.7	10.6	6.5
Incr Delay (d2), s/veh	1.7	0.0	0.0	1.5	0.0	3.1	0.0	2.0	0.4	0.5	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.6	0.0	3.6	0.1	6.5	1.3	1.4	7.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	0.0	37.4	0.0	35.7	10.4	15.9	3.6	9.1	12.1	6.6
LnGrp LOS	D	A	A	D	A	D	B	B	A	A	B	A
Approach Vol, veh/h		9			303			661			967	
Approach Delay, s/veh		44.2			36.4			13.4			11.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	52.4	14.6	8.0	6.6	60.8		22.6
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	10.0	34.0	11.0	15.0	10.0	34.0		31.0
Max Q Clear Time (g_c+I1), s	10.7	18.2	2.8	5.0	2.2	23.4		10.7
Green Ext Time (p_c), s	0.3	5.8	0.3	0.0	0.0	5.5		1.7

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

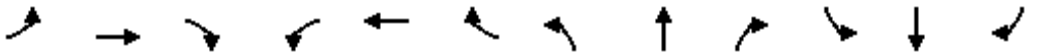
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	324	250	39	44	39
Future Vol, veh/h	35	324	250	39	44	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	348	269	42	47	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	311	0	-	0	714	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	424	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1249	-	-	-	398	749
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1249	-	-	-	383	749
Mov Cap-2 Maneuver	-	-	-	-	383	-
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	660	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1249	-	-	-	497
HCM Lane V/C Ratio	0.03	-	-	-	0.18
HCM Control Delay (s)	8	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	25	260	24	15	8	210	530	32	14	574	75
Future Volume (veh/h)	65	25	260	24	15	8	210	530	32	14	574	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1870	1856	1900	1885	1885
Adj Flow Rate, veh/h	68	26	271	25	16	8	219	552	33	15	598	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	1	2	3	0	1	1
Cap, veh/h	90	21	421	84	35	421	296	851	715	335	618	81
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.45	0.45	0.02	0.38	0.38
Sat Flow, veh/h	0	81	1610	0	135	1610	1795	1870	1572	1810	1634	213
Grp Volume(v), veh/h	94	0	271	41	0	8	219	552	33	15	0	676
Grp Sat Flow(s),veh/h/ln	81	0	1610	135	0	1610	1795	1870	1572	1810	0	1847
Q Serve(g_s), s	0.0	0.0	10.3	0.0	0.0	0.3	4.8	15.7	0.8	0.3	0.0	24.7
Cycle Q Clear(g_c), s	18.0	0.0	10.3	18.0	0.0	0.3	4.8	15.7	0.8	0.3	0.0	24.7
Prop In Lane	0.72		1.00	0.61		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	111	0	421	120	0	421	296	851	715	335	0	698
V/C Ratio(X)	0.84	0.00	0.64	0.34	0.00	0.02	0.74	0.65	0.05	0.04	0.00	0.97
Avail Cap(c_a), veh/h	111	0	421	120	0	421	328	851	715	506	0	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.4	0.0	22.5	21.2	0.0	18.8	15.3	14.5	10.4	13.3	0.0	21.0
Incr Delay (d2), s/veh	41.6	0.0	3.3	1.7	0.0	0.0	7.2	2.4	0.1	0.0	0.0	26.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	4.1	0.5	0.0	0.1	2.1	5.9	0.2	0.1	0.0	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.0	0.0	25.9	22.9	0.0	18.9	22.5	16.9	10.5	13.3	0.0	47.5
LnGrp LOS	E	A	C	C	A	B	C	B	B	B	A	D
Approach Vol, veh/h		365			49			804			691	
Approach Delay, s/veh		37.7			22.2			18.2			46.8	
Approach LOS		D			C			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	37.3		24.0	12.8	32.0		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	26.0		18.0	8.0	26.0		18.0				
Max Q Clear Time (g_c+I1), s	2.3	17.7		20.0	6.8	26.7		20.0				
Green Ext Time (p_c), s	0.0	3.6		0.0	0.1	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			32.4									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	17.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↰	↱
Traffic Vol, veh/h	108	1	81	5	0	2	51	552	4	2	571	81
Future Vol, veh/h	108	1	81	5	0	2	51	552	4	2	571	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	175	-	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	0	0	0	2	2	0	0	2	2
Mvmt Flow	114	1	85	5	0	2	54	581	4	2	601	85

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1297	1298	601	1380	1379	581	686	0	0	585	0	0
Stage 1	605	605	-	689	689	-	-	-	-	-	-	-
Stage 2	692	693	-	691	690	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	7.1	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	139	163	500	123	146	517	908	-	-	1000	-	-
Stage 1	485	491	-	439	450	-	-	-	-	-	-	-
Stage 2	434	448	-	438	449	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	129	148	500	94	133	517	908	-	-	1000	-	-
Mov Cap-2 Maneuver	129	148	-	94	133	-	-	-	-	-	-	-
Stage 1	442	490	-	400	410	-	-	-	-	-	-	-
Stage 2	394	409	-	361	448	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	133.3	36.1	0.8	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	908	-	-	189	123	1000	-	-
HCM Lane V/C Ratio	0.059	-	-	1.058	0.06	0.002	-	-
HCM Control Delay (s)	9.2	0	-	133.3	36.1	8.6	0	-
HCM Lane LOS	A	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	9.4	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	167	16	5	111	19	8	48	9	10	64	67
Future Vol, veh/h	111	167	16	5	111	19	8	48	9	10	64	67
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	5	0	0	1	5	0	0	0	0	0	0
Mvmt Flow	123	186	18	6	123	21	9	53	10	11	71	74
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.3	9	8.9	9.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	38%	4%	7%
Vol Thru, %	74%	57%	82%	45%
Vol Right, %	14%	5%	14%	48%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	294	135	141
LT Vol	8	111	5	10
Through Vol	48	167	111	64
RT Vol	9	16	19	67
Lane Flow Rate	72	327	150	157
Geometry Grp	1	1	1	1
Degree of Util (X)	0.104	0.427	0.199	0.211
Departure Headway (Hd)	5.179	4.702	4.779	4.848
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	761	746	735
Service Time	3.26	2.76	2.848	2.918
HCM Lane V/C Ratio	0.105	0.43	0.201	0.214
HCM Control Delay	8.9	11.3	9	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	2.2	0.7	0.8

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	268	40	10	181	67	29	4	16	67	8	3
Future Vol, veh/h	1	268	40	10	181	67	29	4	16	67	8	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	285	43	11	193	71	31	4	17	71	9	3
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	12.1	10.6	9	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	59%	100%	0%	100%	0%	86%
Vol Thru, %	8%	0%	87%	0%	73%	10%
Vol Right, %	33%	0%	13%	0%	27%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	1	308	10	248	78
LT Vol	29	1	0	10	0	67
Through Vol	4	0	268	0	181	8
RT Vol	16	0	40	0	67	3
Lane Flow Rate	52	1	328	11	264	83
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.079	0.002	0.46	0.017	0.367	0.129
Departure Headway (Hd)	5.449	5.652	5.058	5.702	5.008	5.614
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	652	631	708	625	715	634
Service Time	3.531	3.407	2.812	3.459	2.765	3.691
HCM Lane V/C Ratio	0.08	0.002	0.463	0.018	0.369	0.131
HCM Control Delay	9	8.4	12.1	8.6	10.7	9.5
HCM Lane LOS	A	A	B	A	B	A
HCM 95th-tile Q	0.3	0	2.4	0.1	1.7	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	493	11	2	706
Future Vol, veh/h	9	5	493	11	2	706
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	1	1
Mvmt Flow	10	6	548	12	2	784

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1336	548	0	0	560	0
Stage 1	548	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	169	536	-	-	1016	-
Stage 1	579	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	168	536	-	-	1016	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	579	-	-	-	-	-
Stage 2	447	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	223	1016	-
HCM Lane V/C Ratio	-	-	0.07	0.002	-
HCM Control Delay (s)	-	-	22.4	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	893	592	239	495	357	358
Future Volume (vph)	893	592	239	495	357	358
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	66.3	66.3	92.4	91.2	44.4	44.4
Actuated g/C Ratio	0.44	0.44	0.62	0.61	0.30	0.30
v/c Ratio	0.75	0.69	0.81	0.29	0.91	0.64
Control Delay	41.3	6.6	38.5	15.1	76.0	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	6.6	38.5	15.1	76.0	12.7
LOS	D	A	D	B	E	B
Approach Delay	27.5			22.7	44.3	
Approach LOS	C			C	D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	971	643	260	538	388	389
v/c Ratio	0.75	0.69	0.81	0.29	0.91	0.64
Control Delay	41.3	6.6	38.5	15.1	76.0	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	6.6	38.5	15.1	76.0	12.7
Queue Length 50th (ft)	444	0	120	134	354	44
Queue Length 95th (ft)	548	105	#239	171	#528	157
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1287	934	351	1859	463	636
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.69	0.74	0.29	0.84	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1368	255	241	827	276	328
Future Volume (vph)	1368	255	241	827	276	328
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	88.1	88.1	109.1	109.0	28.0	28.0
Actuated g/C Ratio	0.59	0.59	0.73	0.73	0.19	0.19
v/c Ratio	0.83	0.26	0.86	0.41	0.87	0.73
Control Delay	17.5	1.0	50.5	8.9	84.5	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	1.0	50.5	8.9	84.5	30.6
LOS	B	A	D	A	F	C
Approach Delay	14.9			18.3	55.3	
Approach LOS	B			B	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 83.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1425	266	251	861	288	342
v/c Ratio	0.83	0.26	0.86	0.41	0.87	0.73
Control Delay	17.5	1.0	50.5	8.9	84.5	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	1.0	50.5	8.9	84.5	30.6
Queue Length 50th (ft)	537	3	122	165	272	119
Queue Length 95th (ft)	632	14	#260	203	#417	239
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			135
Base Capacity (vph)	1724	1039	314	2114	355	487
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.26	0.80	0.41	0.81	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1624	8	1083	21	13
Future Volume (vph)	1624	8	1083	21	13
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	136.0	136.0	136.0	14.0	14.0
Total Split (%)	90.7%	90.7%	90.7%	9.3%	9.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	137.6	137.6	137.6	7.3	7.3
Actuated g/C Ratio	0.92	0.92	0.92	0.05	0.05
v/c Ratio	0.62	0.04	0.41	0.24	0.15
Control Delay	1.4	1.4	1.4	74.8	31.9
Queue Delay	0.1	0.0	0.0	0.0	0.0
Total Delay	1.5	1.4	1.4	74.8	31.9
LOS	A	A	A	E	C
Approach Delay	1.5		1.4	58.4	
Approach LOS	A		A	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 90 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 2.1	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1677	8	1105	21	13
v/c Ratio	0.62	0.04	0.41	0.24	0.15
Control Delay	1.4	1.4	1.4	74.8	31.9
Queue Delay	0.1	0.0	0.0	0.0	0.0
Total Delay	1.5	1.4	1.4	74.8	31.9
Queue Length 50th (ft)	55	1	57	20	0
Queue Length 95th (ft)	m84	m2	57	50	24
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2693	228	2698	98	100
Starvation Cap Reductn	136	0	0	0	0
Spillback Cap Reductn	0	0	103	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.04	0.43	0.21	0.13

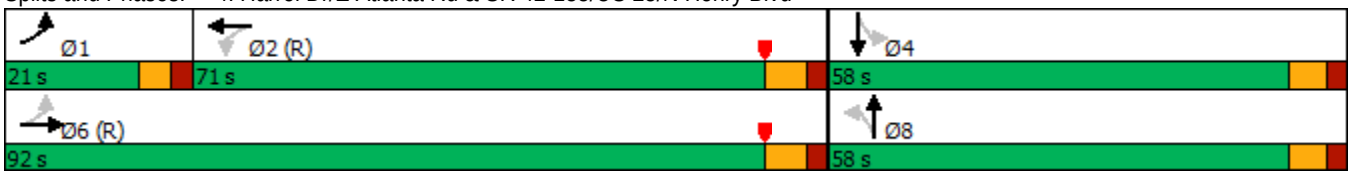
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	199	1288	13	859	22	30	288	4
Future Volume (vph)	199	1288	13	859	22	30	288	4
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	21.0	92.0	71.0	71.0	58.0	58.0	58.0	58.0
Total Split (%)	14.0%	61.3%	47.3%	47.3%	38.7%	38.7%	38.7%	38.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	86.5	85.4	64.7	64.7		50.8		50.8
Actuated g/C Ratio	0.58	0.57	0.43	0.43		0.34		0.34
v/c Ratio	0.91	0.80	0.11	0.93		0.21		0.98
Control Delay	56.9	8.5	21.2	45.1		23.4		85.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	56.9	8.5	21.2	45.1		23.4		85.1
LOS	E	A	C	D		C		F
Approach Delay		14.9		44.8		23.4		85.1
Approach LOS		B		D		C		F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 146 (97%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 94.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	207	1353	14	1153	115	437
v/c Ratio	0.91	0.80	0.11	0.93	0.21	0.98
Control Delay	56.9	8.5	21.2	45.1	23.4	85.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	8.5	21.2	45.1	23.4	85.1
Queue Length 50th (ft)	116	232	6	578	50	410
Queue Length 95th (ft)	m125	m258	m16	#712	100	#640
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	230	1684	125	1240	549	450
Starvation Cap Reductn	0	0	0	1	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.80	0.11	0.93	0.21	0.97

Intersection Summary

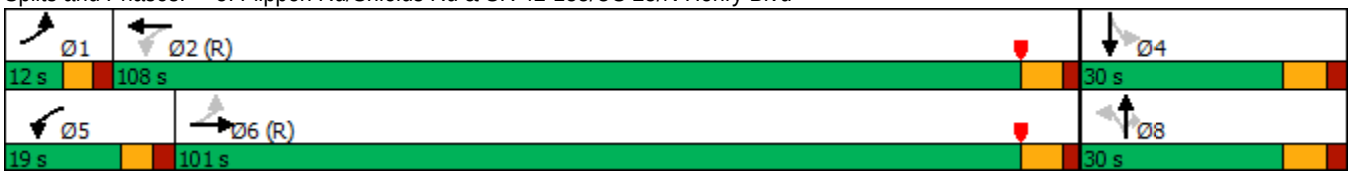
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

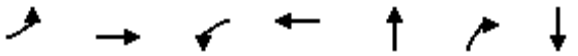
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	22	1495	188	938	148	45	168	11	44
Future Volume (vph)	22	1495	188	938	148	45	168	11	44
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.9	94.7	114.0	106.2		22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.76	0.71		0.15	0.15		0.15
v/c Ratio	0.05	1.01	0.90	0.46		0.97	0.52		0.34
Control Delay	5.1	49.9	71.7	5.7		116.9	27.5		52.7
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.1	49.9	71.7	5.7		116.9	27.5		52.7
LOS	A	D	E	A		F	C		D
Approach Delay		49.4		16.6		75.4			52.7
Approach LOS		D		B		E			D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 41.1	Intersection LOS: D
Intersection Capacity Utilization 94.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	1803	192	972	197	171	80
v/c Ratio	0.05	1.01	0.90	0.46	0.97	0.52	0.34
Control Delay	5.1	49.9	71.7	5.7	116.9	27.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	49.9	71.7	5.7	116.9	27.5	52.7
Queue Length 50th (ft)	5	~922	144	88	194	53	60
Queue Length 95th (ft)	11	#1105	m166	m127	#359	132	115
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	418	1792	218	2091	204	332	237
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.01	0.88	0.46	0.97	0.52	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

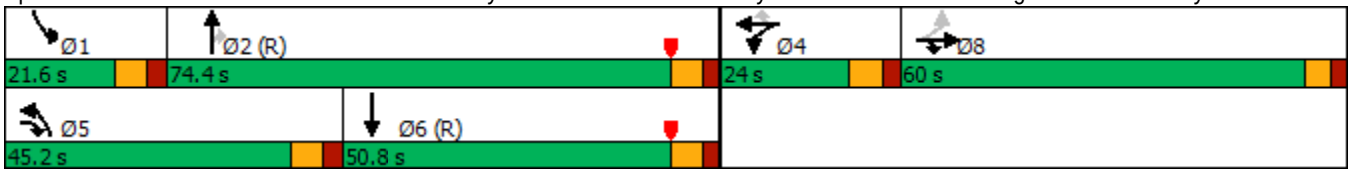
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	231	173	1077	125	172	126	621	360	71	70	579
Future Volume (vph)	231	173	1077	125	172	126	621	360	71	70	579
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		8	8 5	4	4		5	2		1	6
Permitted Phases	8					4			2		
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9
Total Split (s)	60.0	60.0		24.0	24.0	24.0	45.2	74.4	74.4	21.6	50.8
Total Split (%)	33.3%	33.3%		13.3%	13.3%	13.3%	25.1%	41.3%	41.3%	12.0%	28.2%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		54.0	99.2	17.0	17.0	17.0	38.4	68.7	68.7	13.5	43.9
Actuated g/C Ratio		0.30	0.55	0.09	0.09	0.09	0.21	0.38	0.38	0.08	0.24
v/c Ratio		1.04	0.84	0.78	1.02	0.47	1.01	0.65	0.11	0.55	1.04
Control Delay		105.1	54.5	108.3	150.3	13.6	107.3	52.3	2.4	95.9	106.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		105.1	54.5	108.3	150.3	13.6	107.3	52.3	2.4	95.9	106.4
LOS		F	D	F	F	B	F	D	A	F	F
Approach Delay		68.3			97.2			81.4			105.5
Approach LOS		E			F			F			F

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 83.0	Intersection LOS: F
Intersection Capacity Utilization 90.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	421	1122	130	179	131	647	375	74	73	732
v/c Ratio	1.04	0.84	0.78	1.02	0.47	1.01	0.65	0.11	0.55	1.04
Control Delay	105.1	54.5	108.3	150.3	13.6	107.3	52.3	2.4	95.9	106.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.1	54.5	108.3	150.3	13.6	107.3	52.3	2.4	95.9	106.4
Queue Length 50th (ft)	~528	779	153	~223	0	~412	368	0	84	~481
Queue Length 95th (ft)	#774	795	#268	#394	57	#544	496	16	145	#618
Internal Link Dist (ft)	895			523			751			1095
Turn Bay Length (ft)					100	340		290	580	
Base Capacity (vph)	405	1338	167	175	279	638	580	667	144	707
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.84	0.78	1.02	0.47	1.01	0.65	0.11	0.51	1.04

Intersection Summary

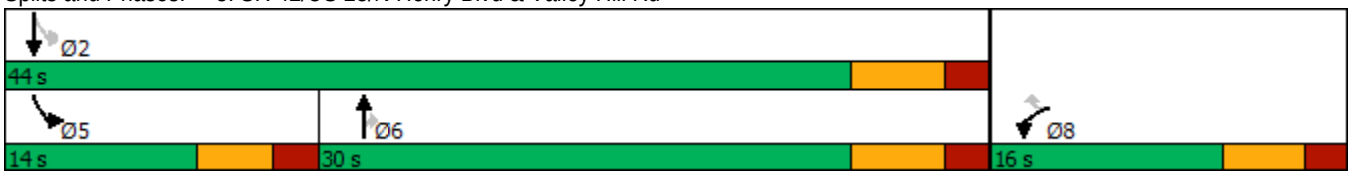
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	101	98	537	87	231	792
Future Volume (vph)	101	98	537	87	231	792
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	30.0	30.0	14.0	44.0
Total Split (%)	26.7%	26.7%	50.0%	50.0%	23.3%	73.3%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.2	10.2	24.9	24.9	39.6	40.3
Actuated g/C Ratio	0.18	0.18	0.44	0.44	0.69	0.71
v/c Ratio	0.33	0.27	0.82	0.12	0.46	0.74
Control Delay	25.2	8.0	29.4	3.7	7.2	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	8.0	29.4	3.7	7.2	14.2
LOS	C	A	C	A	A	B
Approach Delay	16.7		25.8			12.6
Approach LOS	B		C			B

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 57.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 63.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	103	100	548	89	236	808
v/c Ratio	0.33	0.27	0.82	0.12	0.46	0.74
Control Delay	25.2	8.0	29.4	3.7	7.2	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	8.0	29.4	3.7	7.2	14.2
Queue Length 50th (ft)	33	0	176	0	28	186
Queue Length 95th (ft)	72	34	#354	22	53	#441
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	325	372	672	739	520	1091
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.27	0.82	0.12	0.45	0.74

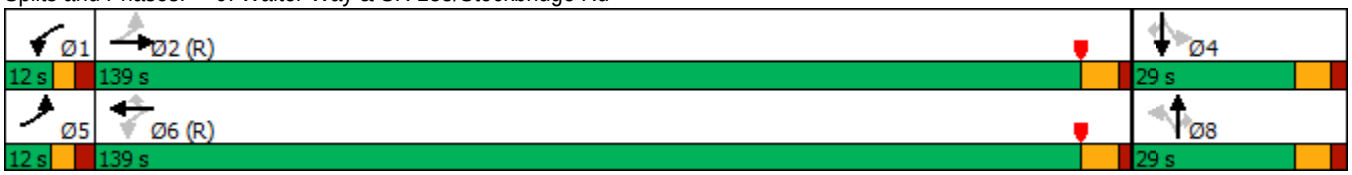
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	1589	41	978	25	69	5	71	10	7	24
Future Volume (vph)	23	1589	41	978	25	69	5	71	10	7	24
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	12.0	139.0	12.0	139.0	139.0	29.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	6.7%	77.2%	6.7%	77.2%	77.2%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	146.8	141.0	148.3	143.4	143.4		15.6	15.6		15.6	15.6
Actuated g/C Ratio	0.82	0.78	0.82	0.80	0.80		0.09	0.09		0.09	0.09
v/c Ratio	0.05	0.72	0.20	0.42	0.02		0.67	0.37		0.14	0.13
Control Delay	2.7	8.9	3.5	4.1	0.1		105.1	18.5		75.9	1.4
Queue Delay	0.0	0.2	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	2.7	9.1	3.5	4.1	0.1		105.1	18.5		75.9	1.4
LOS	A	A	A	A	A		F	B		E	A
Approach Delay		9.0		4.0			62.6			32.6	
Approach LOS		A		A			E			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 171 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	1731	43	1029	26	78	75	18	25
v/c Ratio	0.05	0.72	0.20	0.42	0.02	0.67	0.37	0.14	0.13
Control Delay	2.7	8.9	3.5	4.1	0.1	105.1	18.5	75.9	1.4
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	9.1	3.5	4.1	0.1	105.1	18.5	75.9	1.4
Queue Length 50th (ft)	4	191	4	163	0	91	0	20	0
Queue Length 95th (ft)	m3	87	m1	m21	m0	151	55	48	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	440	2405	212	2457	1273	164	258	179	243
Starvation Cap Reductn	0	150	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.77	0.20	0.42	0.02	0.48	0.29	0.10	0.10

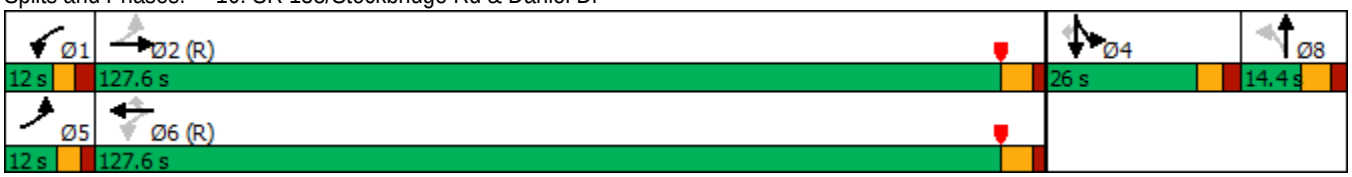
Intersection Summary

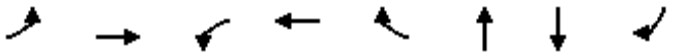
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	98	1563	9	1006	76	11	4	5	124
Future Volume (vph)	98	1563	9	1006	76	11	4	5	124
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	12.0	127.6	12.0	127.6	127.6	14.4	14.4	26.0	26.0
Total Split (%)	6.7%	70.9%	6.7%	70.9%	70.9%	8.0%	8.0%	14.4%	14.4%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	141.8	137.7	137.3	130.4	130.4		8.0	16.7	16.7
Actuated g/C Ratio	0.79	0.76	0.76	0.72	0.72		0.04	0.09	0.09
v/c Ratio	0.25	0.74	0.04	0.46	0.07		0.35	0.73	0.48
Control Delay	1.6	22.2	3.1	6.0	0.9		70.5	104.2	16.9
Queue Delay	0.0	19.6	0.0	0.1	0.0		0.0	0.0	0.1
Total Delay	1.6	41.8	3.1	6.1	0.9		70.5	104.2	17.0
LOS	A	D	A	A	A		E	F	B
Approach Delay		39.5		5.7			70.5	59.5	
Approach LOS		D		A			E	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 159 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	100	1624	9	1027	78	25	121	127
v/c Ratio	0.25	0.74	0.04	0.46	0.07	0.35	0.73	0.48
Control Delay	1.6	22.2	3.1	6.0	0.9	70.5	104.2	16.9
Queue Delay	0.0	19.6	0.0	0.1	0.0	0.0	0.0	0.1
Total Delay	1.6	41.8	3.1	6.1	0.9	70.5	104.2	17.0
Queue Length 50th (ft)	3	357	1	218	3	18	141	0
Queue Length 95th (ft)	m2	m25	m2	80	0	55	217	69
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	400	2185	217	2235	1172	73	197	288
Starvation Cap Reductn	0	605	0	260	0	0	0	0
Spillback Cap Reductn	0	0	0	118	0	0	0	4
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	1.03	0.04	0.52	0.07	0.34	0.61	0.45

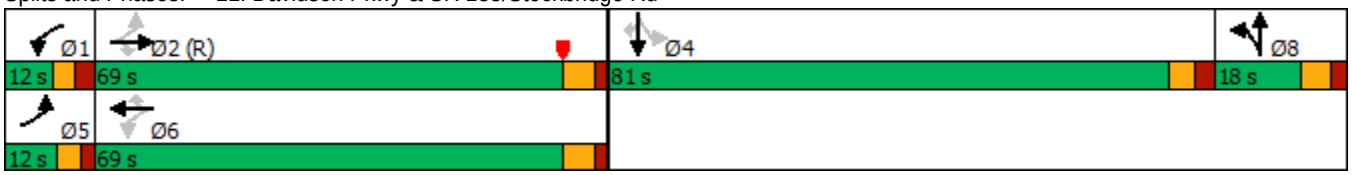
Intersection Summary

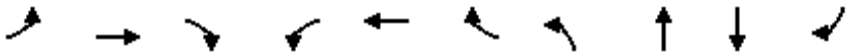
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	1578	335	37	1024	61	223	28	70	27	188
Future Volume (vph)	165	1578	335	37	1024	61	223	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	18.0	18.0	81.0	81.0	81.0
Total Split (%)	6.7%	38.3%	38.3%	6.7%	38.3%	38.3%	10.0%	10.0%	45.0%	45.0%	45.0%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	72.0	65.1	65.1	69.9	62.7	62.7	11.7	11.7		75.0	75.0
Actuated g/C Ratio	0.40	0.36	0.36	0.39	0.35	0.35	0.06	0.06		0.42	0.42
v/c Ratio	1.52	1.59	0.55	0.38	1.07	0.10	1.42	1.31		2.10	0.27
Control Delay	291.4	304.2	34.9	40.3	82.0	1.8	288.4	244.5		586.8	17.0
Queue Delay	0.0	0.5	1.9	0.0	0.0	0.0	0.0	0.0		3.2	0.0
Total Delay	291.4	304.7	36.9	40.3	82.0	1.8	288.4	244.5		590.0	17.0
LOS	F	F	D	D	F	A	F	F		F	B
Approach Delay		260.4			76.2			266.7		211.9	
Approach LOS		F			E			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 96 (53%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.10	
Intersection Signal Delay: 202.5	Intersection LOS: F
Intersection Capacity Utilization 78.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	172	1644	349	39	1067	64	155	151	101	196
v/c Ratio	1.52	1.59	0.55	0.38	1.07	0.10	1.42	1.31	2.10	0.27
Control Delay	291.4	304.2	34.9	40.3	82.0	1.8	288.4	244.5	586.8	17.0
Queue Delay	0.0	0.5	1.9	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Total Delay	291.4	304.7	36.9	40.3	82.0	1.8	288.4	244.5	590.0	17.0
Queue Length 50th (ft)	~228	~1501	238	18	~715	9	~257	~229	~187	69
Queue Length 95th (ft)	m#326	#1615	m260	54	#855	6	#430	#402	#272	133
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	113	1035	632	105	997	610	109	115	48	719
Starvation Cap Reductn	0	95	154	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	4	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	1.75	0.73	0.37	1.07	0.10	1.42	1.31	2.30	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

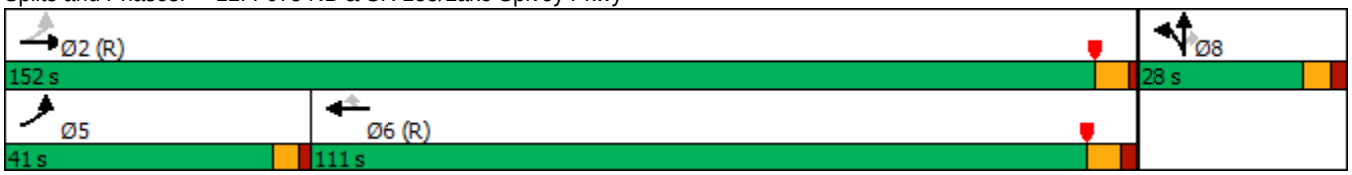
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	358	1908	1196	247	0	154
Future Volume (vph)	358	1908	1196	247	0	154
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	152.1	151.1	121.7	121.7	16.8	16.8
Actuated g/C Ratio	0.84	0.84	0.68	0.68	0.09	0.09
v/c Ratio	0.82	0.83	0.64	0.23	0.30	0.81
Control Delay	29.7	8.9	12.9	3.4	79.1	80.8
Queue Delay	0.0	48.9	1.6	0.5	0.0	2.5
Total Delay	29.7	57.8	14.4	3.9	79.1	83.3
LOS	C	E	B	A	E	F
Approach Delay		53.3	12.6		82.3	
Approach LOS		D	B		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	373	1988	1246	257	50	160
v/c Ratio	0.82	0.83	0.64	0.23	0.30	0.81
Control Delay	29.7	8.9	12.9	3.4	79.1	80.8
Queue Delay	0.0	48.9	1.6	0.5	0.0	2.5
Total Delay	29.7	57.8	14.4	3.9	79.1	83.3
Queue Length 50th (ft)	197	647	254	41	56	124
Queue Length 95th (ft)	m212	m271	m155	m17	103	211
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	557	2404	1937	1136	215	240
Starvation Cap Reductn	0	256	474	538	0	0
Spillback Cap Reductn	0	1328	0	0	0	25
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	1.85	0.85	0.43	0.23	0.74

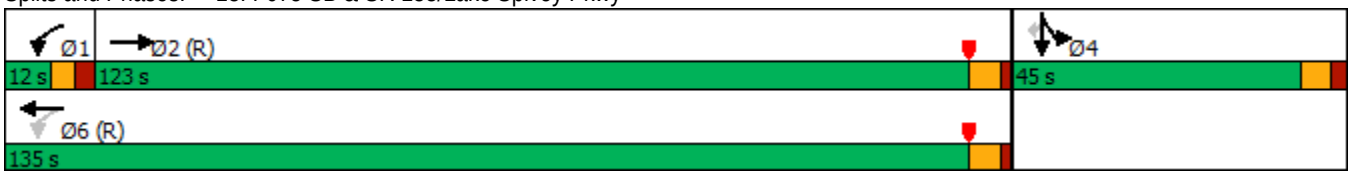
Intersection Summary

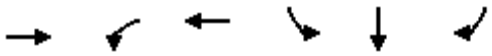
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1823	96	1147	463	0	579
Future Volume (vph)	1823	96	1147	463	0	579
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	1.04	0.93	0.58	0.66	0.67	1.00
Control Delay	51.3	105.8	10.0	74.9	75.0	106.2
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	51.3	105.8	10.2	74.9	75.0	106.2
LOS	D	F	B	E	E	F
Approach Delay	51.3		17.6		92.3	
Approach LOS	D		B		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 51.5	Intersection LOS: D
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1939	99	1182	238	239	597
v/c Ratio	1.04	0.93	0.58	0.66	0.67	1.00
Control Delay	51.3	105.8	10.0	74.9	75.0	106.2
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	51.3	105.8	10.2	74.9	75.0	106.2
Queue Length 50th (ft)	~1284	55	238	274	275	~406
Queue Length 95th (ft)	#1415	m#192	118	385	388	#556
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1856	107	2054	359	359	596
Starvation Cap Reductn	0	0	223	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.93	0.65	0.66	0.67	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

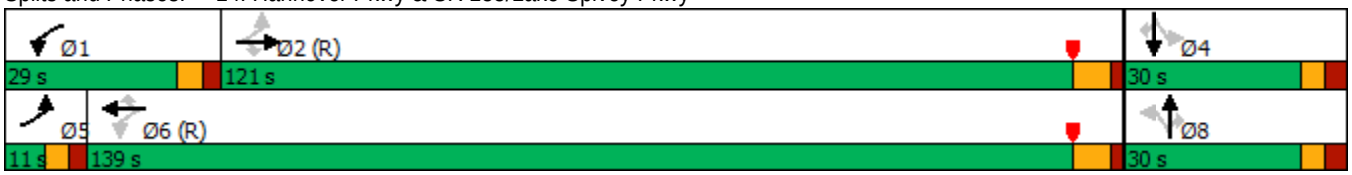
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

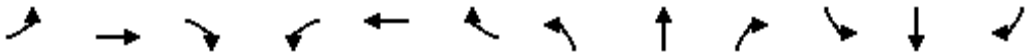
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1590	47	197	1424	95	65	23	197	85	17	46
Future Volume (vph)	45	1590	47	197	1424	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	131.7	125.2	125.2	150.0	140.4	140.4	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.73	0.70	0.70	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.18	0.75	0.04	0.68	0.60	0.08	0.50	0.13	0.66	0.66	0.10	0.20
Control Delay	3.5	10.6	0.0	34.2	8.2	3.7	88.6	73.4	26.2	100.2	72.5	1.9
Queue Delay	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	3.5	10.8	0.0	34.2	8.5	3.7	88.6	73.4	26.3	100.2	72.5	1.9
LOS	A	B	A	C	A	A	F	E	C	F	E	A
Approach Delay		10.3			11.2			44.4			66.5	
Approach LOS		B			B			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	1656	49	205	1483	99	68	24	205	89	18	48
v/c Ratio	0.18	0.75	0.04	0.68	0.60	0.08	0.50	0.13	0.66	0.66	0.10	0.20
Control Delay	3.5	10.6	0.0	34.2	8.2	3.7	88.6	73.4	26.2	100.2	72.5	1.9
Queue Delay	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	3.5	10.8	0.0	34.2	8.5	3.7	88.6	73.4	26.3	100.2	72.5	1.9
Queue Length 50th (ft)	5	240	0	57	355	8	78	26	37	103	20	0
Queue Length 95th (ft)	m10	890	m0	m198	m324	m27	132	58	127	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	265	2222	1128	346	2491	1246	182	244	356	181	244	289
Starvation Cap Reductn	0	0	0	0	404	0	0	0	0	0	0	0
Spillback Cap Reductn	0	106	0	0	0	0	0	0	5	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.78	0.04	0.59	0.71	0.08	0.37	0.10	0.58	0.49	0.07	0.17

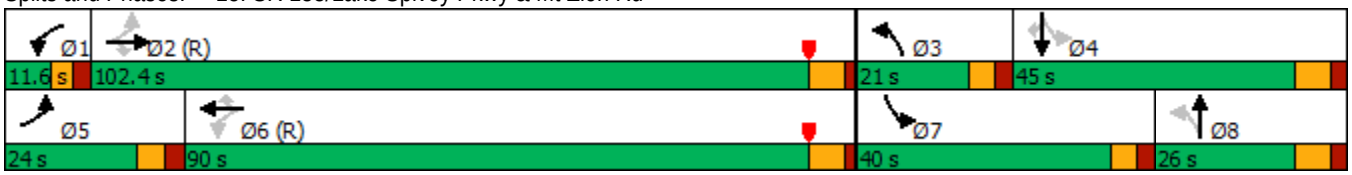
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	174	1258	168	47	1120	303	148	87	313	79	173
Future Volume (vph)	174	1258	168	47	1120	303	148	87	313	79	173
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	110.2	100.7	100.7	96.8	89.7	89.7	33.0	17.5	57.5	36.1	36.1
Actuated g/C Ratio	0.61	0.56	0.56	0.54	0.50	0.50	0.18	0.10	0.32	0.20	0.20
v/c Ratio	0.72	0.75	0.19	0.28	0.75	0.36	0.57	0.75	0.82	0.23	0.40
Control Delay	37.3	23.5	3.3	18.3	36.4	9.0	56.6	97.3	68.3	61.3	9.6
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	23.7	3.3	18.3	36.4	9.0	56.6	97.3	68.3	61.3	9.6
LOS	D	C	A	B	D	A	E	F	E	E	A
Approach Delay		23.0			30.2			75.5		49.3	
Approach LOS		C			C			E		D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 33.2	Intersection LOS: C
Intersection Capacity Utilization 86.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	185	1338	179	50	1191	322	157	136	333	84	184
v/c Ratio	0.72	0.75	0.19	0.28	0.75	0.36	0.57	0.75	0.82	0.23	0.40
Control Delay	37.3	23.5	3.3	18.3	36.4	9.0	56.6	97.3	68.3	61.3	9.6
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	23.7	3.3	18.3	36.4	9.0	56.6	97.3	68.3	61.3	9.6
Queue Length 50th (ft)	88	816	53	17	636	123	136	147	325	83	0
Queue Length 95th (ft)	159	418	2	m40	676	99	203	#239	436	139	72
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	287	1787	943	177	1591	894	282	195	413	392	478
Starvation Cap Reductn	0	59	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.77	0.19	0.28	0.75	0.36	0.56	0.70	0.81	0.21	0.38

Intersection Summary

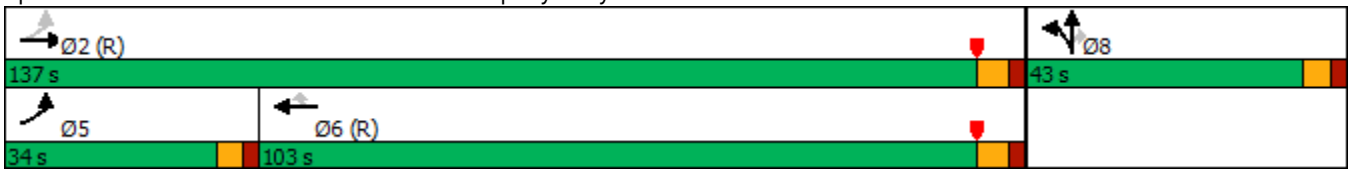
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	233	1576	1089	417	0	139
Future Volume (vph)	233	1576	1089	417	0	139
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	142.9	141.5	122.0	122.0	25.5	25.5
Actuated g/C Ratio	0.79	0.79	0.68	0.68	0.14	0.14
v/c Ratio	0.66	0.68	0.55	0.38	0.83	0.55
Control Delay	13.2	14.1	9.2	1.5	100.5	50.9
Queue Delay	0.0	0.2	0.0	0.0	0.5	0.0
Total Delay	13.2	14.3	9.2	1.5	101.0	50.9
LOS	B	B	A	A	F	D
Approach Delay		14.2	7.0		79.9	
Approach LOS		B	A		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 82.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	253	1713	1184	453	208	151
v/c Ratio	0.66	0.68	0.55	0.38	0.83	0.55
Control Delay	13.2	14.1	9.2	1.5	100.5	50.9
Queue Delay	0.0	0.2	0.0	0.0	0.5	0.0
Total Delay	13.2	14.3	9.2	1.5	101.0	50.9
Queue Length 50th (ft)	26	504	173	10	243	105
Queue Length 95th (ft)	m171	1090	166	10	328	178
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	498	2511	2164	1183	362	369
Starvation Cap Reductn	0	220	0	0	0	0
Spillback Cap Reductn	0	0	0	0	24	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.75	0.55	0.38	0.62	0.41

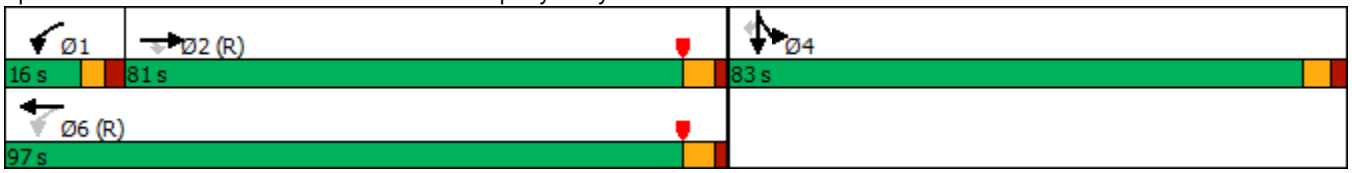
Intersection Summary

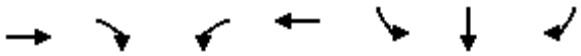
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1084	239	140	1211	726	0	616
Future Volume (vph)	1084	239	140	1211	726	0	616
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	76.2	76.2	93.6	93.1	74.4	74.4	74.4
Actuated g/C Ratio	0.42	0.42	0.52	0.52	0.41	0.41	0.41
v/c Ratio	0.85	0.31	0.81	0.78	0.56	0.56	0.95
Control Delay	40.3	5.2	54.0	40.3	43.4	43.4	71.1
Queue Delay	0.0	0.0	0.0	0.3	0.5	0.5	0.0
Total Delay	40.3	5.2	54.0	40.6	43.9	43.9	71.1
LOS	D	A	D	D	D	D	E
Approach Delay	34.0			42.0		56.4	
Approach LOS	C			D		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 82.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1153	254	149	1288	386	386	655
v/c Ratio	0.85	0.31	0.81	0.78	0.56	0.56	0.95
Control Delay	40.3	5.2	54.0	40.3	43.4	43.4	71.1
Queue Delay	0.0	0.0	0.0	0.3	0.5	0.5	0.0
Total Delay	40.3	5.2	54.0	40.6	43.9	43.9	71.1
Queue Length 50th (ft)	523	64	110	682	355	355	687
Queue Length 95th (ft)	794	60	#218	811	474	474	#954
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1359	819	185	1651	717	717	706
Starvation Cap Reductn	0	0	0	63	0	0	0
Spillback Cap Reductn	0	0	0	0	88	88	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.31	0.81	0.81	0.61	0.61	0.93

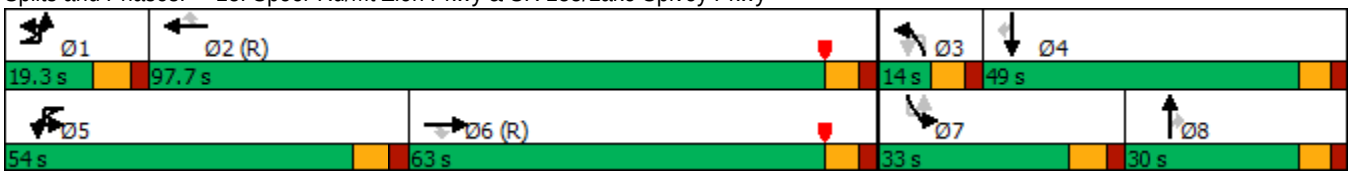
Intersection Summary

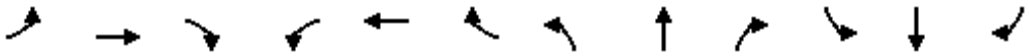
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	657	96	591	805	226	60	141	233	322	292	132
Future Volume (vph)	116	657	96	591	805	226	60	141	233	322	292	132
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	12.1	75.3	75.3	40.5	103.6	103.6	7.9	13.3	13.3	22.4	28.3	28.3
Actuated g/C Ratio	0.07	0.42	0.42	0.22	0.58	0.58	0.04	0.07	0.07	0.12	0.16	0.16
v/c Ratio	0.56	0.53	0.13	0.87	0.46	0.24	0.42	0.57	0.71	0.79	0.55	0.36
Control Delay	86.4	36.8	3.3	78.3	25.5	5.6	92.3	88.8	20.1	90.4	73.2	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	36.8	3.3	78.3	25.5	5.6	92.3	88.8	20.1	90.4	73.2	7.6
LOS	F	D	A	E	C	A	F	F	C	F	E	A
Approach Delay		40.1			43.0			52.4			69.0	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 48.6	Intersection LOS: D
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	129	692	101	671	847	238	63	148	245	339	307	139
v/c Ratio	0.56	0.53	0.13	0.87	0.46	0.24	0.42	0.57	0.71	0.79	0.55	0.36
Control Delay	86.4	36.8	3.3	78.3	25.5	5.6	92.3	88.8	20.1	90.4	73.2	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	36.8	3.3	78.3	25.5	5.6	92.3	88.8	20.1	90.4	73.2	7.6
Queue Length 50th (ft)	65	284	6	406	300	28	38	91	0	203	179	0
Queue Length 95th (ft)	98	343	25	m453	m354	m45	67	128	95	259	220	44
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	246	1301	777	893	1839	1012	153	460	418	488	833	493
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.53	0.13	0.75	0.46	0.24	0.41	0.32	0.59	0.69	0.37	0.28

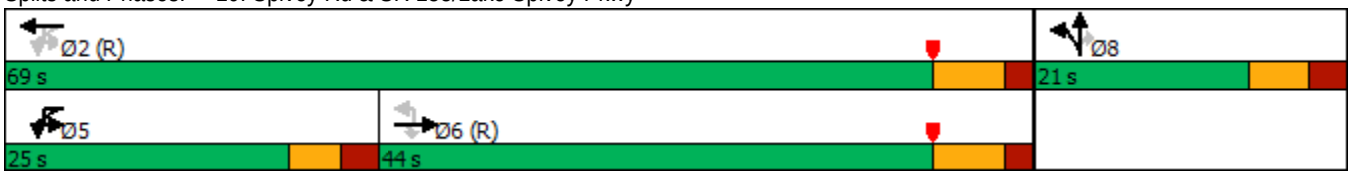
Intersection Summary

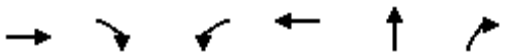
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBU	WBL	WBT	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	664	44	35	274	680	0	155
Future Volume (vph)	664	44	35	274	680	0	155
Turn Type	NA	Perm	pm+pt	pm+pt	NA	NA	Perm
Protected Phases	6		5	5	2	8	
Permitted Phases		6	2	2			8
Detector Phase	6	6	5	5	2	8	8
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	12.0	18.8	14.7	14.7
Total Split (s)	44.0	44.0	25.0	25.0	69.0	21.0	21.0
Total Split (%)	48.9%	48.9%	27.8%	27.8%	76.7%	23.3%	23.3%
Yellow Time (s)	4.8	4.8	3.5	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	51.3	51.3		68.6	67.8	8.7	8.7
Actuated g/C Ratio	0.57	0.57		0.76	0.75	0.10	0.10
v/c Ratio	0.39	0.05		0.55	0.31	0.09	0.54
Control Delay	12.2	0.1		12.3	4.4	37.4	13.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	12.2	0.1		12.3	4.4	37.4	13.3
LOS	B	A		B	A	D	B
Approach Delay	11.4				6.9	15.5	
Approach LOS	B				A	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





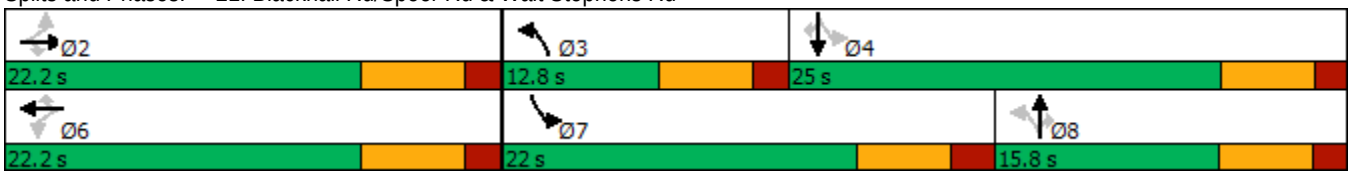
Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	699	46	325	716	16	163
v/c Ratio	0.39	0.05	0.55	0.31	0.09	0.54
Control Delay	12.2	0.1	12.3	4.4	37.4	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	0.1	12.3	4.4	37.4	13.3
Queue Length 50th (ft)	104	0	49	63	9	0
Queue Length 95th (ft)	176	0	178	109	27	55
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1772	952	706	2342	286	393
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.05	0.46	0.31	0.06	0.41

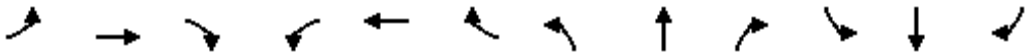
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	349	64	92	250	230	35	142	78	535	346	15
Future Volume (vph)	24	349	64	92	250	230	35	142	78	535	346	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	16.1	16.1	16.1	16.1	16.1	16.1	14.7	10.3	10.3	27.2	22.9	22.9
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.26	0.18	0.18	0.48	0.41	0.41
v/c Ratio	0.08	0.66	0.10	0.43	0.47	0.36	0.10	0.42	0.15	0.84	0.46	0.02
Control Delay	17.5	26.9	0.3	26.0	21.9	3.7	9.3	27.1	0.6	24.5	16.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	26.9	0.3	26.0	21.9	3.7	9.3	27.1	0.6	24.5	16.0	0.1
LOS	B	C	A	C	C	A	A	C	A	C	B	A
Approach Delay		22.5			15.2			16.5			20.8	
Approach LOS		C			B			B			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 56.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 88.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	24	353	65	93	253	232	35	143	79	540	349	15
v/c Ratio	0.08	0.66	0.10	0.43	0.47	0.36	0.10	0.42	0.15	0.84	0.46	0.02
Control Delay	17.5	26.9	0.3	26.0	21.9	3.7	9.3	27.1	0.6	24.5	16.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	26.9	0.3	26.0	21.9	3.7	9.3	27.1	0.6	24.5	16.0	0.1
Queue Length 50th (ft)	7	115	0	28	77	0	5	47	0	121	65	0
Queue Length 95th (ft)	22	#221	0	69	139	33	16	95	0	#243	177	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	313	546	655	221	546	655	363	340	516	670	816	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.65	0.10	0.42	0.46	0.35	0.10	0.42	0.15	0.81	0.43	0.02

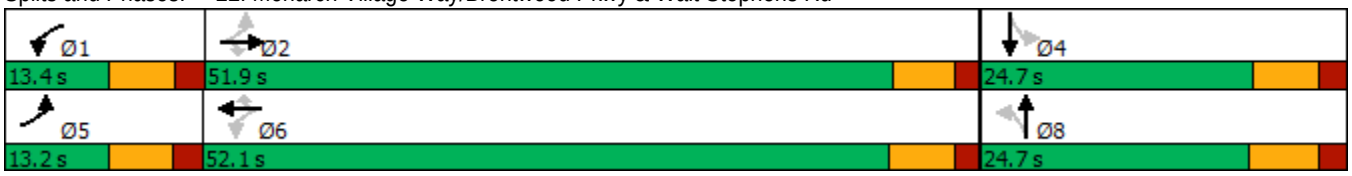
Intersection Summary

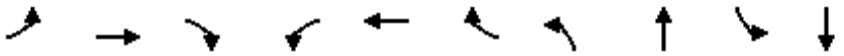
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	83	757	102	28	431	97	82	15	75	15
Future Volume (vph)	83	757	102	28	431	97	82	15	75	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	51.9	51.9	13.4	52.1	52.1	24.7	24.7	24.7	24.7
Total Split (%)	14.7%	57.7%	57.7%	14.9%	57.9%	57.9%	27.4%	27.4%	27.4%	27.4%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	41.1	41.4	41.4	38.1	35.3	35.3	12.3	12.3	12.5	12.5
Actuated g/C Ratio	0.65	0.65	0.65	0.60	0.55	0.55	0.19	0.19	0.20	0.20
v/c Ratio	0.13	0.63	0.10	0.06	0.42	0.10	0.33	0.16	0.29	0.21
Control Delay	5.4	14.7	1.9	5.1	14.0	1.8	32.6	15.2	31.5	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	14.7	1.9	5.1	14.0	1.8	32.6	15.2	31.5	12.9
LOS	A	B	A	A	B	A	C	B	C	B
Approach Delay		12.5			11.4			25.7		22.0
Approach LOS		B			B			C		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 63.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd





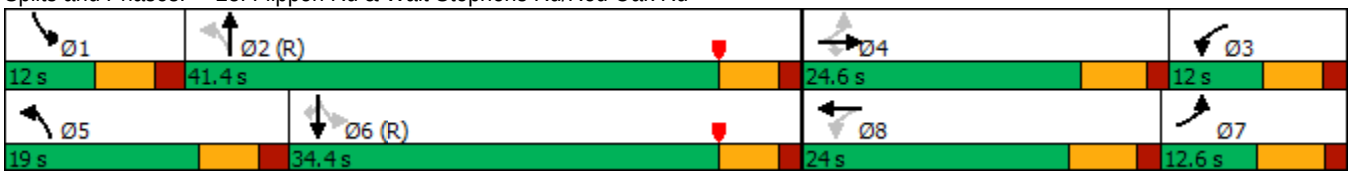
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	765	103	28	435	98	83	55	76	79
v/c Ratio	0.13	0.63	0.10	0.06	0.42	0.10	0.33	0.16	0.29	0.21
Control Delay	5.4	14.7	1.9	5.1	14.0	1.8	32.6	15.2	31.5	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	14.7	1.9	5.1	14.0	1.8	32.6	15.2	31.5	12.9
Queue Length 50th (ft)	10	149	0	3	118	0	25	4	23	4
Queue Length 95th (ft)	28	476	18	13	213	16	84	39	78	45
Internal Link Dist (ft)		2243			6582			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	624	1404	1224	431	1404	1224	412	547	427	564
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.54	0.08	0.06	0.31	0.08	0.20	0.10	0.18	0.14

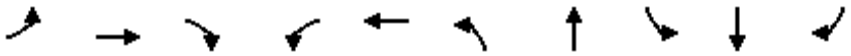
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	183	230	460	35	128	334	313	44	456	208
Future Volume (vph)	183	230	460	35	128	334	313	44	456	208
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	24.8	19.7	19.7	19.3	13.0	51.2	44.3	36.5	30.7	30.7
Actuated g/C Ratio	0.28	0.22	0.22	0.21	0.14	0.57	0.49	0.41	0.34	0.34
v/c Ratio	0.54	0.60	0.75	0.17	0.61	0.88	0.41	0.10	0.76	0.31
Control Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
LOS	C	D	B	C	D	D	B	B	D	A
Approach Delay		25.6			39.6		24.5		25.3	
Approach LOS		C			D		C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	197	247	495	38	167	359	368	47	490	224
v/c Ratio	0.54	0.60	0.75	0.17	0.61	0.88	0.41	0.10	0.76	0.31
Control Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
Queue Length 50th (ft)	84	131	50	15	85	99	164	12	254	0
Queue Length 95th (ft)	139	209	#182	36	140	#299	109	29	#415	34
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	367	414	659	224	372	409	907	465	641	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.60	0.75	0.17	0.45	0.88	0.41	0.10	0.76	0.31

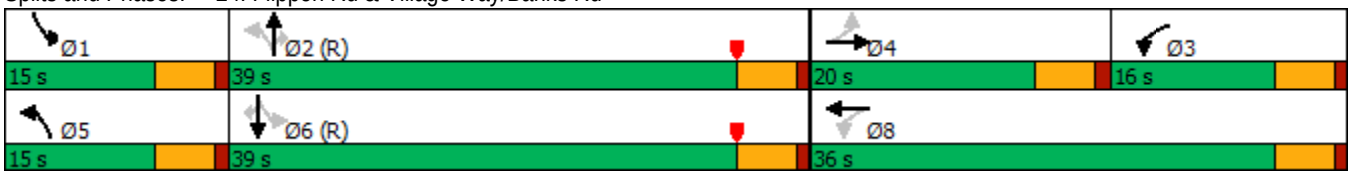
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	2	125	3	7	499	129	229	690	9
Future Volume (vph)	5	2	125	3	7	499	129	229	690	9
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	10.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	16.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	20.0	20.0	16.0	36.0	15.0	39.0	39.0	15.0	39.0	39.0
Total Split (%)	22.2%	22.2%	17.8%	40.0%	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	18.0	18.0	56.3	46.3	46.3	61.2	59.0	59.0
Actuated g/C Ratio		0.17	0.20	0.20	0.63	0.51	0.51	0.68	0.66	0.66
v/c Ratio		0.03	0.38	0.38	0.01	0.54	0.15	0.47	0.59	0.01
Control Delay		28.7	33.4	7.0	6.9	18.9	3.0	5.5	10.1	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	33.4	7.0	6.9	18.9	3.0	5.5	10.1	0.0
LOS		C	C	A	A	B	A	A	B	A
Approach Delay		28.7		18.3		15.5			8.9	
Approach LOS		C		B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 69.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	130	173	7	520	134	239	719	9
v/c Ratio	0.03	0.38	0.38	0.01	0.54	0.15	0.47	0.59	0.01
Control Delay	28.7	33.4	7.0	6.9	18.9	3.0	5.5	10.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	33.4	7.0	6.9	18.9	3.0	5.5	10.1	0.0
Queue Length 50th (ft)	3	67	1	1	171	0	14	46	0
Queue Length 95th (ft)	17	96	44	8	371	31	m24	#643	m0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	308	348	669	473	968	901	510	1221	1108
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.37	0.26	0.01	0.54	0.15	0.47	0.59	0.01

Intersection Summary

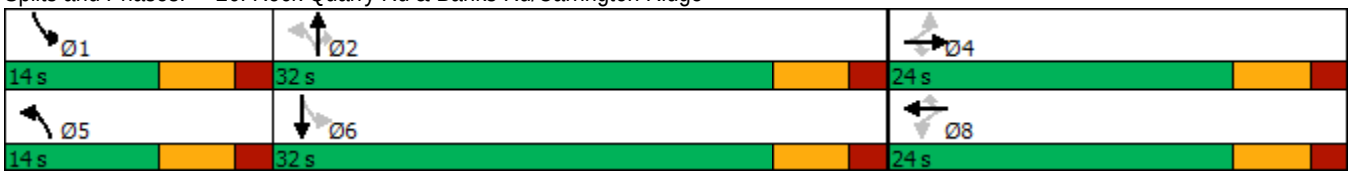
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	65	25	260	24	15	8	210	530	32	14	574
Future Volume (vph)	65	25	260	24	15	8	210	530	32	14	574
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4			8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	4	4	4	8	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	15.0	6.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	24.0	14.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	32.0	32.0	14.0	32.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	20.0%	45.7%	45.7%	20.0%	45.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)		10.0	10.0		10.0	10.0	39.2	37.7	37.7	32.0	26.0
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.63	0.61	0.61	0.52	0.42
v/c Ratio		0.41	0.56		0.18	0.02	0.56	0.49	0.03	0.03	0.86
Control Delay		28.8	8.2		23.9	0.1	13.2	10.6	0.1	5.4	31.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.8	8.2		23.9	0.1	13.2	10.6	0.1	5.4	31.0
LOS		C	A		C	A	B	B	A	A	C
Approach Delay		13.6			20.0			10.9			30.5
Approach LOS		B			C			B			C

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 62	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	94	271	41	8	219	552	33	15	676
v/c Ratio	0.41	0.56	0.18	0.02	0.56	0.49	0.03	0.03	0.86
Control Delay	28.8	8.2	23.9	0.1	13.2	10.6	0.1	5.4	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	8.2	23.9	0.1	13.2	10.6	0.1	5.4	31.0
Queue Length 50th (ft)	32	0	13	0	27	83	0	2	213
Queue Length 95th (ft)	70	54	37	0	#91	285	0	8	#458
Internal Link Dist (ft)	1722		273			625			1560
Turn Bay Length (ft)		585		110	195		600	135	
Base Capacity (vph)	413	661	419	568	390	1132	1008	597	783
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.41	0.10	0.01	0.56	0.49	0.03	0.03	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

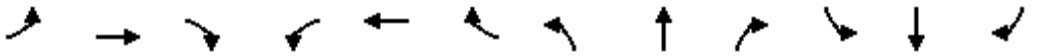
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	3	63	12	3	16	81	1281	25	9	620	24
Future Vol, veh/h	25	3	63	12	3	16	81	1281	25	9	620	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	26	3	66	13	3	17	85	1348	26	9	653	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1517	2215	327	1864	2214	674	678	0	0	1374	0	0
Stage 1	671	671	-	1518	1518	-	-	-	-	-	-	-
Stage 2	846	1544	-	346	696	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	82	43	669	45	43	397	910	-	-	495	-	-
Stage 1	412	453	-	125	180	-	-	-	-	-	-	-
Stage 2	323	175	-	643	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	67	38	669	35	38	397	910	-	-	495	-	-
Mov Cap-2 Maneuver	67	38	-	35	38	-	-	-	-	-	-	-
Stage 1	374	445	-	113	163	-	-	-	-	-	-	-
Stage 2	275	159	-	565	433	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.7	88.6	0.5	0.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	910	-	-	62	669	36	397	495	-	-
HCM Lane V/C Ratio	0.094	-	-	0.475	0.099	0.439	0.042	0.019	-	-
HCM Control Delay (s)	9.4	-	-	107.4	11	167.6	14.5	12.4	-	-
HCM Lane LOS	A	-	-	F	B	F	B	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.9	0.3	1.5	0.1	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	78	390	41	62	51	738	509	45	25	235	156
Future Volume (veh/h)	87	78	390	41	62	51	738	509	45	25	235	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	91	81	406	43	65	53	769	530	47	26	245	162
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	222	264	1034	109	115	97	851	1636	893	50	926	436
Arrive On Green	0.05	0.05	0.05	0.06	0.06	0.06	0.28	0.56	0.56	0.03	0.31	0.31
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	91	81	406	43	65	53	769	530	47	26	245	162
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	7.3	5.4	14.6	3.0	4.4	4.2	31.6	12.7	1.7	1.9	8.1	11.7
Cycle Q Clear(g_c), s	7.3	5.4	14.6	3.0	4.4	4.2	31.6	12.7	1.7	1.9	8.1	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	264	1034	109	115	97	851	1636	893	50	926	436
V/C Ratio(X)	0.41	0.31	0.39	0.39	0.57	0.54	0.90	0.32	0.05	0.52	0.26	0.37
Avail Cap(c_a), veh/h	290	345	1141	110	115	98	1012	1636	893	84	926	436
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.7	55.8	28.9	58.7	59.3	59.2	45.1	15.2	12.8	62.3	33.5	34.8
Incr Delay (d2), s/veh	1.4	0.8	0.3	2.8	7.1	7.0	10.3	0.5	0.1	21.1	0.7	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.6	4.8	1.5	2.3	1.9	12.8	4.1	0.6	1.1	2.9	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	56.6	29.2	61.4	66.4	66.2	55.5	15.7	12.9	83.4	34.2	37.2
LnGrp LOS	E	E	C	E	E	E	E	B	B	F	C	D
Approach Vol, veh/h		578			161			1346			433	
Approach Delay, s/veh		37.6			65.0			38.3			38.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	80.1		15.0	43.1	47.5		24.4				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	6.1	65.1		8.0	43.2	28.1		24.0				
Max Q Clear Time (g_c+I1), s	3.9	14.7		6.4	33.6	13.7		16.6				
Green Ext Time (p_c), s	0.0	8.1		0.1	2.7	3.1		1.8				

Intersection Summary			
HCM 6th Ctrl Delay		39.9	
HCM 6th LOS		D	

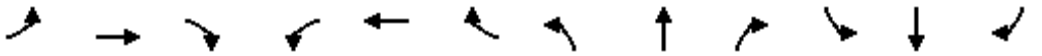
Intersection	
Int Delay, s/veh	12.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	164	247	280	81	63	77
Future Vol, veh/h	164	247	280	81	63	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	269	405	459	133	103	126

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	592	0	-	0	1402	459
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	943	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	979	-	-	-	152	596
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	374	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	979	-	-	-	110	596
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	374	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	71.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	979	-	-	-	110	596
HCM Lane V/C Ratio	0.275	-	-	-	0.939	0.212
HCM Control Delay (s)	10.1	-	-	-	142.4	12.7
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	1.1	-	-	-	5.8	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	129	336	16	140	21	248	283	13	17	223	141
Future Volume (veh/h)	166	129	336	16	140	21	248	283	13	17	223	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	184	143	0	18	156	23	276	314	14	19	248	157
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	384	435		347	222	33	425	531	24	329	373	316
Arrive On Green	0.11	0.23	0.00	0.03	0.14	0.14	0.12	0.30	0.30	0.03	0.20	0.20
Sat Flow, veh/h	1781	1870	1585	1767	1581	233	1781	1777	79	1753	1841	1560
Grp Volume(v), veh/h	184	143	0	18	0	179	276	0	328	19	248	157
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1814	1781	0	1856	1753	1841	1560
Q Serve(g_s), s	4.7	3.6	0.0	0.5	0.0	5.3	6.7	0.0	8.5	0.5	7.0	5.1
Cycle Q Clear(g_c), s	4.7	3.6	0.0	0.5	0.0	5.3	6.7	0.0	8.5	0.5	7.0	5.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	384	435		347	0	255	425	0	555	329	373	316
V/C Ratio(X)	0.48	0.33		0.05	0.00	0.70	0.65	0.00	0.59	0.06	0.66	0.50
Avail Cap(c_a), veh/h	400	628		494	0	573	425	0	669	467	631	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	18.1	0.0	19.9	0.0	23.2	14.9	0.0	16.9	17.0	20.8	20.0
Incr Delay (d2), s/veh	0.9	0.4	0.0	0.1	0.0	3.5	3.5	0.0	2.1	0.1	4.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.4	0.0	0.2	0.0	2.3	2.6	0.0	3.3	0.2	3.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	18.5	0.0	19.9	0.0	26.7	18.4	0.0	19.0	17.1	25.1	22.6
LnGrp LOS	B	B		B	A	C	B	A	B	B	C	C
Approach Vol, veh/h		327	A		197			604			424	
Approach Delay, s/veh		18.3			26.1			18.8			23.8	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	22.5	7.3	19.3	13.0	17.1	12.5	14.1
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.5	10.5	2.5	5.6	8.7	9.0	6.7	7.3
Green Ext Time (p_c), s	0.0	2.1	0.0	0.5	0.0	2.5	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	1	30	2	0	1	30	409	2	1	583	81
Future Vol, veh/h	84	1	30	2	0	1	30	409	2	1	583	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	175	-	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	0	7	0	0	0	5	5	0	0	5	5
Mvmt Flow	90	1	32	2	0	1	32	440	2	1	627	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	913	1135	627	1193	1220	220	714	0	0	442	0	0
Stage 1	629	629	-	504	504	-	-	-	-	-	-	-
Stage 2	284	506	-	689	716	-	-	-	-	-	-	-
Critical Hdwy	7.405	6.5	6.305	7.3	6.5	6.9	4.175	-	-	4.1	-	-
Critical Hdwy Stg 1	6.205	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.605	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5665	4	3.3665	3.5	4	3.3	2.2475	-	-	2.2	-	-
Pot Cap-1 Maneuver	235	204	471	155	182	790	867	-	-	1129	-	-
Stage 1	459	478	-	524	544	-	-	-	-	-	-	-
Stage 2	688	543	-	439	437	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	228	196	471	140	175	790	867	-	-	1129	-	-
Mov Cap-2 Maneuver	228	196	-	140	175	-	-	-	-	-	-	-
Stage 1	442	478	-	505	524	-	-	-	-	-	-	-
Stage 2	662	523	-	408	437	-	-	-	-	-	-	-

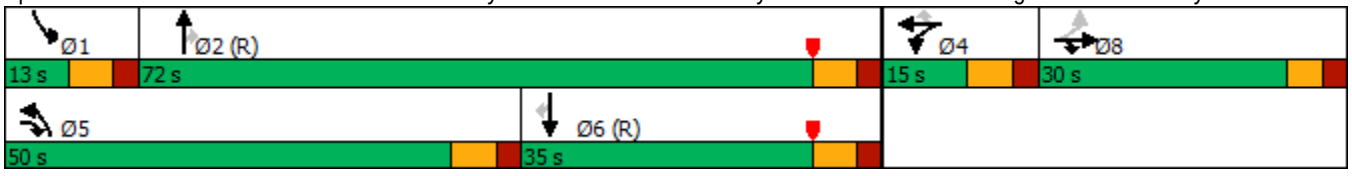
Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	24	0.6	0
HCM LOS	D	C		

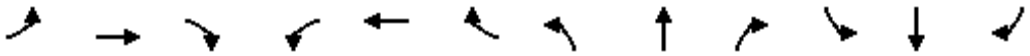
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	867	-	-	228	471	193	1129	-	-
HCM Lane V/C Ratio	0.037	-	-	0.401	0.068	0.017	0.001	-	-
HCM Control Delay (s)	9.3	-	-	31	13.2	24	8.2	0	-
HCM Lane LOS	A	-	-	D	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.2	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	78	390	41	62	51	738	509	45	25	235	156
Future Volume (vph)	87	78	390	41	62	51	738	509	45	25	235	156
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	30.0	30.0		15.0	15.0	15.0	50.0	72.0	72.0	13.0	35.0	35.0
Total Split (%)	23.1%	23.1%		11.5%	11.5%	11.5%	38.5%	55.4%	55.4%	10.0%	26.9%	26.9%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	20.1	20.1	66.5	10.3	10.3	10.3	39.6	73.2	73.2	8.7	36.3	36.3
Actuated g/C Ratio	0.15	0.15	0.51	0.08	0.08	0.08	0.30	0.56	0.56	0.07	0.28	0.28
v/c Ratio	0.51	0.28	0.33	0.31	0.45	0.17	0.84	0.33	0.05	0.22	0.30	0.31
Control Delay	46.1	35.9	19.8	61.9	66.4	1.2	51.5	18.8	0.1	62.6	41.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	35.9	19.8	61.9	66.4	1.2	51.5	18.8	0.1	62.6	41.8	4.3
LOS	D	D	B	E	E	A	D	B	A	E	D	A
Approach Delay		26.2			43.8			36.8			29.0	
Approach LOS		C			D			D			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 33.5	Intersection LOS: C
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





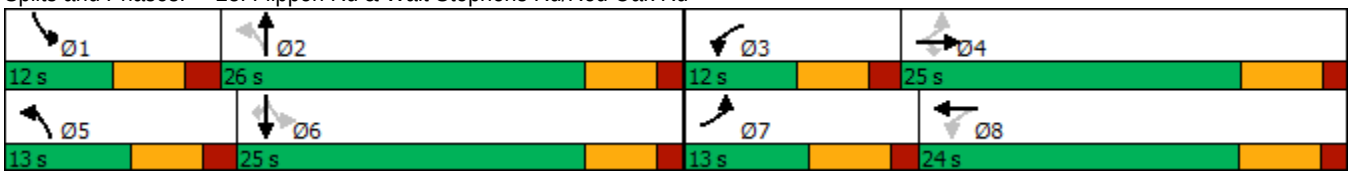
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	91	81	406	43	65	53	769	530	47	26	245	163
v/c Ratio	0.51	0.28	0.33	0.31	0.45	0.17	0.84	0.33	0.05	0.22	0.30	0.31
Control Delay	46.1	35.9	19.8	61.9	66.4	1.2	51.5	18.8	0.1	62.6	41.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	35.9	19.8	61.9	66.4	1.2	51.5	18.8	0.1	62.6	41.8	4.3
Queue Length 50th (ft)	78	67	140	35	53	0	307	145	0	21	90	0
Queue Length 95th (ft)	125	91	231	74	102	0	377	195	0	54	141	34
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	165					100	340		290	580		580
Base Capacity (vph)	214	343	1292	139	146	307	1000	1682	981	118	849	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.24	0.31	0.31	0.45	0.17	0.77	0.32	0.05	0.22	0.29	0.30

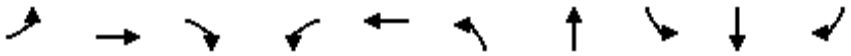
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	166	129	336	16	140	248	283	17	223	141
Future Volume (vph)	166	129	336	16	140	248	283	17	223	141
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	23.9	22.8	22.8	18.1	11.7	27.1	26.3	20.9	15.3	15.3
Actuated g/C Ratio	0.37	0.35	0.35	0.28	0.18	0.42	0.40	0.32	0.24	0.24
v/c Ratio	0.44	0.22	0.47	0.05	0.54	0.66	0.44	0.05	0.58	0.30
Control Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
LOS	B	B	A	B	C	C	B	B	C	A
Approach Delay		11.3			28.4		20.8		18.2	
Approach LOS		B			C		C		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 65	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	184	143	373	18	179	276	328	19	248	157
v/c Ratio	0.44	0.22	0.47	0.05	0.54	0.66	0.44	0.05	0.58	0.30
Control Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	18.3	4.9	13.8	29.9	23.9	18.2	12.1	28.4	2.8
Queue Length 50th (ft)	49	37	0	4	62	69	82	4	86	0
Queue Length 95th (ft)	98	101	63	16	123	#168	214	16	165	19
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	414	658	801	395	509	419	750	396	550	619
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.22	0.47	0.05	0.35	0.66	0.44	0.05	0.45	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	55.7

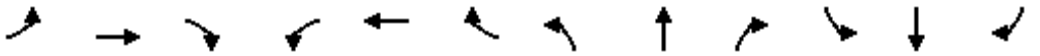
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	4	105	25	5	35	98	959	37	38	1630	78
Future Vol, veh/h	25	4	105	25	5	35	98	959	37	38	1630	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	26	4	109	26	5	36	102	999	39	40	1698	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2484	3020	849	2134	3062	500	1779	0	0	1038	0	0
Stage 1	1778	1778	-	1203	1203	-	-	-	-	-	-	-
Stage 2	706	1242	-	931	1859	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 15	13	304	28	12	516	345	-	-	665	-	-
Stage 1	85	134	-	196	256	-	-	-	-	-	-	-
Stage 2	393	245	-	287	122	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	9	304	~ 9	8	516	345	-	-	665	-	-
Mov Cap-2 Maneuver	~ 5	9	-	~ 9	8	-	-	-	-	-	-	-
Stage 1	60	126	-	138	180	-	-	-	-	-	-	-
Stage 2	250	172	-	167	115	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 810.6	$ 896.5	1.8	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	345	-	-	5	304	9	516	665	-	-
HCM Lane V/C Ratio	0.296	-	-	6.042	0.36	3.472	0.071	0.06	-	-
HCM Control Delay (s)	19.8	-	-	$ 3660.6	23.4	$ 1927.9	12.5	10.8	-	-
HCM Lane LOS	C	-	-	F	C	F	B	B	-	-
HCM 95th %tile Q(veh)	1.2	-	-	5.3	1.6	5.1	0.2	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	173	1077	125	172	126	621	360	71	70	579	124
Future Volume (veh/h)	231	173	1077	125	172	126	621	360	71	70	579	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	241	180	1122	130	179	131	647	375	74	73	603	129
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	414	561	1262	244	505	428	650	1250	682	91	795	355
Arrive On Green	0.03	0.10	0.10	0.06	0.27	0.27	0.21	0.43	0.43	0.05	0.27	0.27
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	241	180	1122	130	179	131	647	375	74	73	603	129
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	17.0	16.1	54.0	9.4	13.9	11.8	38.2	15.2	5.0	7.3	33.7	14.2
Cycle Q Clear(g_c), s	17.0	16.1	54.0	9.4	13.9	11.8	38.2	15.2	5.0	7.3	33.7	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	561	1262	244	505	428	650	1250	682	91	795	355
V/C Ratio(X)	0.58	0.32	0.89	0.53	0.35	0.31	1.00	0.30	0.11	0.80	0.76	0.36
Avail Cap(c_a), veh/h	414	561	1262	297	551	467	650	1250	682	145	795	355
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	64.0	46.7	43.5	53.0	52.3	70.7	33.6	30.7	84.5	60.5	53.4
Incr Delay (d2), s/veh	1.5	0.3	5.5	2.2	0.5	0.5	34.2	0.6	0.3	34.6	6.7	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	8.2	20.9	4.4	6.8	4.8	17.8	5.5	2.0	4.2	13.2	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	64.3	52.2	45.7	53.6	52.8	105.0	34.2	31.0	119.1	67.2	56.3
LnGrp LOS	D	E	D	D	D	D	F	C	C	F	E	E
Approach Vol, veh/h		1543			440			1096			805	
Approach Delay, s/veh		52.8			51.0			75.8			70.1	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	84.3	24.0	55.6	45.2	55.2	18.6	61.0
Change Period (Y+Rc), s	6.9	6.9	7.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	14.7	67.5	17.0	53.0	38.4	43.9	17.0	* 54
Max Q Clear Time (g_c+I1), s	9.3	17.2	19.0	15.9	40.2	35.7	11.4	56.0
Green Ext Time (p_c), s	0.1	5.7	0.0	2.0	0.0	4.2	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

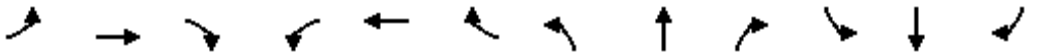
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	94	358	246	49	74	156
Future Vol, veh/h	94	358	246	49	74	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	104	398	273	54	82	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	327	0	-	0	879	273
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1244	-	-	-	318	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	545	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1244	-	-	-	291	766
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	545	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1244	-	-	-	291	766
HCM Lane V/C Ratio	0.084	-	-	-	0.283	0.226
HCM Control Delay (s)	8.2	-	-	-	22.2	11.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.1	0.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	230	460	35	128	27	334	313	29	44	456	208
Future Volume (veh/h)	183	230	460	35	128	27	334	313	29	44	456	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	197	247	0	38	138	29	359	337	31	47	490	224
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	255	293		153	176	37	462	834	77	510	772	654
Arrive On Green	0.08	0.16	0.00	0.04	0.12	0.12	0.09	0.33	0.33	0.05	0.41	0.41
Sat Flow, veh/h	1795	1885	1598	1795	1511	317	1781	1687	155	1795	1885	1598
Grp Volume(v), veh/h	197	247	0	38	0	167	359	0	368	47	490	224
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1828	1781	0	1842	1795	1885	1598
Q Serve(g_s), s	3.8	11.5	0.0	0.0	0.0	8.0	9.6	0.0	13.9	1.3	18.7	5.6
Cycle Q Clear(g_c), s	3.8	11.5	0.0	0.0	0.0	8.0	9.6	0.0	13.9	1.3	18.7	5.6
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	255	293		153	0	212	462	0	911	510	772	654
V/C Ratio(X)	0.77	0.84		0.25	0.00	0.79	0.78	0.00	0.40	0.09	0.63	0.34
Avail Cap(c_a), veh/h	255	390		204	0	364	486	0	911	547	772	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.00	1.00	0.00	1.00	0.83	0.00	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	36.9	0.0	41.4	0.0	38.7	16.3	0.0	19.9	13.9	21.2	7.6
Incr Delay (d2), s/veh	10.7	9.6	0.0	0.8	0.0	6.3	6.2	0.0	1.1	0.1	4.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	5.8	0.0	0.8	0.0	3.9	4.3	0.0	6.3	0.5	8.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	46.5	0.0	42.2	0.0	45.0	22.5	0.0	21.0	14.0	25.2	9.1
LnGrp LOS	D	D		D	A	D	C	A	C	B	C	A
Approach Vol, veh/h		444	A		205			727			761	
Approach Delay, s/veh		47.8			44.5			21.7			19.7	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	50.1	9.8	20.0	17.8	42.4	13.2	16.6
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	3.3	15.9	2.0	13.5	11.6	20.7	5.8	10.0
Green Ext Time (p_c), s	0.0	3.7	0.0	0.5	0.2	3.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	108	1	81	5	0	2	51	552	4	2	571	81
Future Vol, veh/h	108	1	81	5	0	2	51	552	4	2	571	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	175	-	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	0	0	0	2	2	0	0	2	2
Mvmt Flow	114	1	85	5	0	2	54	581	4	2	601	85

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1004	1298	601	1380	1379	291	686	0	0	585	0	0
Stage 1	605	605	-	689	689	-	-	-	-	-	-	-
Stage 2	399	693	-	691	690	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.5	6.23	7.3	6.5	6.9	4.13	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4	3.319	3.5	4	3.3	2.219	-	-	2.2	-	-
Pot Cap-1 Maneuver	208	163	499	114	146	712	906	-	-	1000	-	-
Stage 1	484	491	-	407	450	-	-	-	-	-	-	-
Stage 2	599	448	-	438	449	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	197	153	499	89	137	712	906	-	-	1000	-	-
Mov Cap-2 Maneuver	197	153	-	89	137	-	-	-	-	-	-	-
Stage 1	455	490	-	383	423	-	-	-	-	-	-	-
Stage 2	562	421	-	361	448	-	-	-	-	-	-	-

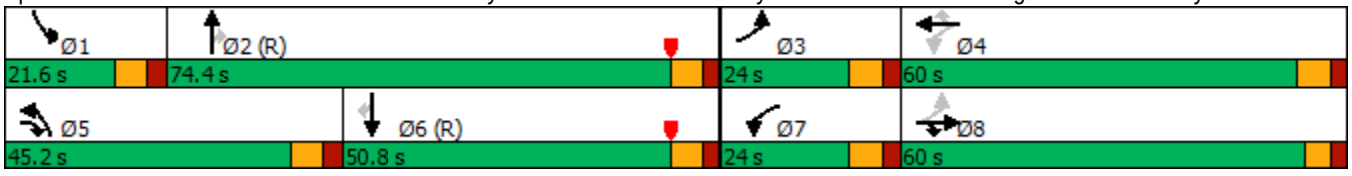
Approach	EB	WB	NB	SB
HCM Control Delay, s	32.5	37.2	0.8	0
HCM LOS	D	E		

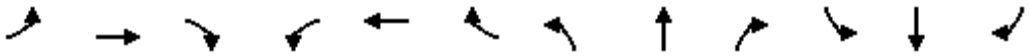
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	906	-	-	196	499	119	1000	-	-
HCM Lane V/C Ratio	0.059	-	-	0.585	0.171	0.062	0.002	-	-
HCM Control Delay (s)	9.2	-	-	46.4	13.7	37.2	8.6	0	-
HCM Lane LOS	A	-	-	E	B	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	3.2	0.6	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	173	1077	125	172	126	621	360	71	70	579	124
Future Volume (vph)	231	173	1077	125	172	126	621	360	71	70	579	124
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	15.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	24.0	60.0		24.0	60.0	60.0	45.2	74.4	74.4	21.6	50.8	50.8
Total Split (%)	13.3%	33.3%		13.3%	33.3%	33.3%	25.1%	41.3%	41.3%	12.0%	28.2%	28.2%
Yellow Time (s)	4.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	71.8	55.4	102.8	67.7	52.4	52.4	40.6	68.9	68.9	13.5	42.0	42.0
Actuated g/C Ratio	0.40	0.31	0.57	0.38	0.29	0.29	0.23	0.38	0.38	0.08	0.23	0.23
v/c Ratio	0.51	0.31	0.81	0.28	0.33	0.23	0.96	0.34	0.11	0.55	0.88	0.31
Control Delay	35.5	46.6	51.0	33.9	51.9	5.0	93.6	40.9	1.8	95.9	81.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	46.6	51.0	33.9	51.9	5.0	93.6	40.9	1.8	95.9	81.7	6.0
LOS	D	D	D	C	D	A	F	D	A	F	F	A
Approach Delay		48.0			32.6			69.4			70.9	
Approach LOS		D			C			E			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 57.0	Intersection LOS: E
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	241	180	1122	130	179	131	647	375	74	73	603	129
v/c Ratio	0.51	0.31	0.81	0.28	0.33	0.23	0.96	0.34	0.11	0.55	0.88	0.31
Control Delay	35.5	46.6	51.0	33.9	51.9	5.0	93.6	40.9	1.8	95.9	81.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	46.6	51.0	33.9	51.9	5.0	93.6	40.9	1.8	95.9	81.7	6.0
Queue Length 50th (ft)	216	160	779	95	166	0	~412	167	0	84	361	0
Queue Length 95th (ft)	265	m262	795	146	242	39	#544	215	11	145	442	39
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	165					100	340		290	580		580
Base Capacity (vph)	474	573	1387	477	549	572	674	1109	674	144	715	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.31	0.81	0.27	0.33	0.23	0.96	0.34	0.11	0.51	0.84	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

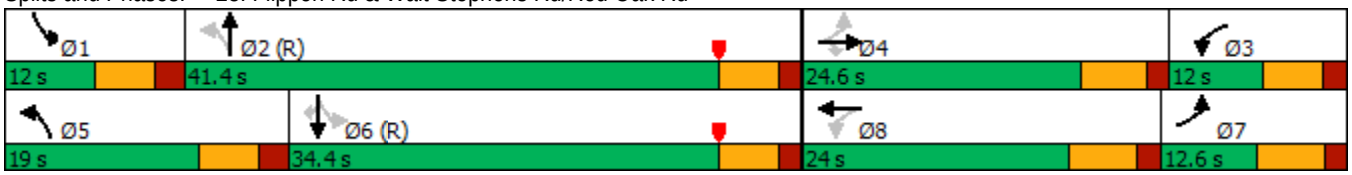
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

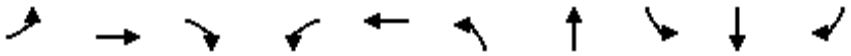
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	183	230	460	35	128	334	313	44	456	208
Future Volume (vph)	183	230	460	35	128	334	313	44	456	208
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	24.8	19.7	19.7	19.3	13.0	51.2	44.3	36.5	30.7	30.7
Actuated g/C Ratio	0.28	0.22	0.22	0.21	0.14	0.57	0.49	0.41	0.34	0.34
v/c Ratio	0.54	0.60	0.75	0.17	0.61	0.88	0.41	0.10	0.76	0.31
Control Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
LOS	C	D	B	C	D	D	B	B	D	A
Approach Delay		25.6			39.6		24.5		25.3	
Approach LOS		C			D		C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	197	247	495	38	167	359	368	47	490	224
v/c Ratio	0.54	0.60	0.75	0.17	0.61	0.88	0.41	0.10	0.76	0.31
Control Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	39.1	16.1	24.0	43.1	38.6	10.7	11.6	36.7	3.2
Queue Length 50th (ft)	84	131	50	15	85	99	164	12	254	0
Queue Length 95th (ft)	139	209	#182	36	140	#299	109	29	#415	34
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	367	414	659	224	372	409	907	465	641	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.60	0.75	0.17	0.45	0.88	0.41	0.10	0.76	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	599	368	463	1014	434	328
Future Volume (veh/h)	599	368	463	1014	434	328
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	651	400	503	1102	472	357
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	695	310	453	1666	465	413
Arrive On Green	0.24	0.24	0.24	0.54	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	651	400	503	1102	472	357
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	21.8	23.7	23.9	25.5	31.9	25.9
Cycle Q Clear(g_c), s	21.8	23.7	23.9	25.5	31.9	25.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	695	310	453	1666	465	413
V/C Ratio(X)	0.94	1.29	1.11	0.66	1.02	0.86
Avail Cap(c_a), veh/h	695	310	453	1666	465	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	38.2	26.9	16.6	34.0	32.0
Incr Delay (d2), s/veh	21.6	152.4	76.0	2.1	45.8	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	20.1	16.2	8.4	16.1	18.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	59.1	190.6	102.8	18.7	79.8	49.4
LnGrp LOS	E	F	F	B	F	D
Approach Vol, veh/h	1051			1605	829	
Approach Delay, s/veh	109.1			45.1	66.7	
Approach LOS	F			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.0		39.0	30.0	31.0
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		27.5		33.9	25.9	25.7
Green Ext Time (p_c), s		14.6		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	812	223	424	1323	174	395
Future Volume (veh/h)	812	223	424	1323	174	395
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	855	235	446	1393	183	416
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1181	632	474	1904	394	350
Arrive On Green	0.13	0.13	0.19	0.65	0.22	0.22
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	855	235	446	1393	183	416
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	27.7	13.5	16.9	31.7	8.9	22.1
Cycle Q Clear(g_c), s	27.7	13.5	16.9	31.7	8.9	22.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1181	632	474	1904	394	350
V/C Ratio(X)	0.72	0.37	0.94	0.73	0.46	1.19
Avail Cap(c_a), veh/h	1181	632	491	1904	394	350
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	32.0	24.4	11.7	33.8	39.0
Incr Delay (d2), s/veh	3.6	1.6	25.6	2.5	1.2	109.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	6.0	9.6	8.9	3.9	28.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	33.6	49.9	14.3	35.0	148.4
LnGrp LOS	D	C	D	B	D	F
Approach Vol, veh/h	1090			1839	599	
Approach Delay, s/veh	40.0			22.9	113.8	
Approach LOS	D			C	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	71.0		29.0	25.0	46.0
Change Period (Y+Rc), s	6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s	64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s	33.7		24.1	18.9	29.7
Green Ext Time (p_c), s	24.1		0.0	0.1	6.4

Intersection Summary	
HCM 6th Ctrl Delay	43.6
HCM 6th LOS	D



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1030	9	9	1503	10	2
Future Volume (veh/h)	1030	9	9	1503	10	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	1051	9	9	1534	10	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2594	22	531	2553	25	22
Arrive On Green	1.00	1.00	1.00	1.00	0.01	0.01
Sat Flow, veh/h	3088	26	532	3040	1781	1585
Grp Volume(v), veh/h	517	543	9	1534	10	2
Grp Sat Flow(s),veh/h/ln	1481	1555	532	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.6	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.6	0.1
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1277	1340	531	2553	25	22
V/C Ratio(X)	0.41	0.41	0.02	0.60	0.40	0.09
Avail Cap(c_a), veh/h	1277	1340	531	2553	125	111
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.66	0.66	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	48.9	48.7
Incr Delay (d2), s/veh	0.8	0.8	0.0	0.7	9.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.2	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.8	0.8	0.0	0.7	58.6	50.3
LnGrp LOS	A	A	A	A	E	D
Approach Vol, veh/h	1060			1543	12	
Approach Delay, s/veh	0.8			0.7	57.2	
Approach LOS	A			A	E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	92.6		7.4		92.6
Change Period (Y+Rc), s	6.4		6.0		6.4
Max Green Setting (Gmax), s	80.6		7.0		80.6
Max Q Clear Time (g_c+I1), s	2.0		2.6		2.0
Green Ext Time (p_c), s	44.4		0.0		21.6

Intersection Summary		
HCM 6th Ctrl Delay		1.0
HCM 6th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	748	78	18	1302	207	71	33	57	279	6	137
Future Volume (veh/h)	191	748	78	18	1302	207	71	33	57	279	6	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	199	779	81	19	1356	216	74	34	59	291	6	143
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	182	1550	161	325	1120	177	234	112	161	326	5	131
Arrive On Green	0.07	0.57	0.57	0.14	0.14	0.14	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1570	2734	284	643	2563	404	618	381	546	902	19	443
Grp Volume(v), veh/h	199	426	434	19	778	794	167	0	0	440	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1523	643	1481	1486	1545	0	0	1364	0	0
Q Serve(g_s), s	7.0	17.2	17.3	2.6	43.7	43.7	0.0	0.0	0.0	21.3	0.0	0.0
Cycle Q Clear(g_c), s	7.0	17.2	17.3	6.9	43.7	43.7	8.2	0.0	0.0	29.5	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.27	0.44		0.35	0.66		0.32
Lane Grp Cap(c), veh/h	182	848	863	325	647	650	508	0	0	462	0	0
V/C Ratio(X)	1.09	0.50	0.50	0.06	1.20	1.22	0.33	0.00	0.00	0.95	0.00	0.00
Avail Cap(c_a), veh/h	182	848	863	325	647	650	508	0	0	462	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.82	0.82	0.82	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	13.1	13.1	28.9	42.8	42.8	27.7	0.0	0.0	36.7	0.0	0.0
Incr Delay (d2), s/veh	81.7	1.4	1.4	0.3	102.6	111.6	0.4	0.0	0.0	29.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	5.6	5.7	0.4	35.7	37.4	3.2	0.0	0.0	14.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.1	14.5	14.5	29.2	145.4	154.3	28.0	0.0	0.0	66.6	0.0	0.0
LnGrp LOS	F	B	B	C	F	F	C	A	A	E	A	A
Approach Vol, veh/h		1059			1591			167			440	
Approach Delay, s/veh		32.1			148.5			28.0			66.6	
Approach LOS		C			F			C			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.0	50.8		36.2		63.8		36.2				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	7.0	43.7		29.5		56.7		29.5				
Max Q Clear Time (g_c+I1), s	9.0	45.7		31.5		19.3		10.2				
Green Ext Time (p_c), s	0.0	0.0		0.0		13.0		0.9				

Intersection Summary		
HCM 6th Ctrl Delay	93.4	
HCM 6th LOS	F	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	856	110	188	1509	7	230	16	191	27	46	20
Future Volume (veh/h)	5	856	110	188	1509	7	230	16	191	27	46	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	901	116	198	1588	7	242	17	201	28	48	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	110	1260	162	318	1701	7	210	10	377	46	68	19
Arrive On Green	0.01	0.49	0.49	0.07	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2589	333	1753	3053	13	590	41	1585	0	287	79
Grp Volume(v), veh/h	5	506	511	198	777	818	259	0	201	97	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1470	1753	1495	1572	631	0	1585	366	0	0
Q Serve(g_s), s	0.1	27.4	27.4	5.3	48.0	48.0	0.0	0.0	11.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	27.4	27.4	5.3	48.0	48.0	23.8	0.0	11.1	23.8	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.01	0.93		1.00	0.29		0.22
Lane Grp Cap(c), veh/h	110	707	715	318	833	876	220	0	377	134	0	0
V/C Ratio(X)	0.05	0.72	0.72	0.62	0.93	0.93	1.18	0.00	0.53	0.73	0.00	0.00
Avail Cap(c_a), veh/h	211	707	715	363	833	876	220	0	377	134	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	20.2	20.2	16.7	20.4	20.4	41.9	0.0	33.2	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	6.1	6.0	0.2	2.5	2.4	117.0	0.0	2.7	21.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	9.5	9.6	1.9	15.5	16.2	12.6	0.0	4.4	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	26.3	26.3	16.9	22.9	22.8	158.9	0.0	35.9	54.0	0.0	0.0
LnGrp LOS	C	C	C	B	C	C	F	A	D	D	A	A
Approach Vol, veh/h		1022			1793			460			97	
Approach Delay, s/veh		26.3			22.2			105.2			54.0	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	62.4		31.2	13.4	55.4		31.2				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	50.0		25.8	7.3	29.4		25.8				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.1	9.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	16.3

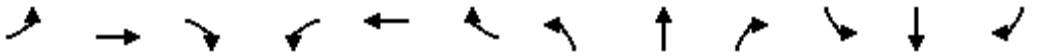
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	3	77	12	3	16	99	1562	25	9	756	29
Future Vol, veh/h	30	3	77	12	3	16	99	1562	25	9	756	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	32	3	81	13	3	17	104	1644	26	9	796	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1862	2708	414	2270	2697	822	827	0	0	1670	0	0
Stage 1	830	830	-	1852	1852	-	-	-	-	-	-	-
Stage 2	1032	1878	-	418	845	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	45	21	587	22	21	317	800	-	-	381	-	-
Stage 1	331	383	-	77	123	-	-	-	-	-	-	-
Stage 2	249	119	-	583	377	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	18	587	15	18	317	800	-	-	381	-	-
Mov Cap-2 Maneuver	33	18	-	15	18	-	-	-	-	-	-	-
Stage 1	288	374	-	67	107	-	-	-	-	-	-	-
Stage 2	199	104	-	486	368	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	268.4	$ 387.9	0.6	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	800	-	-	91	30	381	-	-
HCM Lane V/C Ratio	0.13	-	-	1.272	1.088	0.025	-	-
HCM Control Delay (s)	10.2	-	-	268.4	$ 387.9	14.7	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	8.3	3.7	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	78	475	41	62	51	900	620	45	25	286	190
Future Volume (veh/h)	106	78	475	41	62	51	900	620	45	25	286	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	110	81	495	43	65	53	938	646	47	26	298	198
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	243	290	1178	109	115	97	987	1597	871	50	753	355
Arrive On Green	0.05	0.05	0.05	0.06	0.06	0.06	0.32	0.55	0.55	0.03	0.25	0.25
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	110	81	495	43	65	53	938	646	47	26	298	198
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	8.8	5.4	16.4	3.0	4.4	4.2	39.1	16.7	1.8	1.9	10.8	16.0
Cycle Q Clear(g_c), s	8.8	5.4	16.4	3.0	4.4	4.2	39.1	16.7	1.8	1.9	10.8	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	290	1178	109	115	97	987	1597	871	50	753	355
V/C Ratio(X)	0.45	0.28	0.42	0.39	0.57	0.54	0.95	0.40	0.05	0.52	0.40	0.56
Avail Cap(c_a), veh/h	290	345	1251	110	115	98	1012	1597	871	84	753	355
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	54.7	24.6	58.7	59.3	59.2	42.9	17.0	13.6	62.3	40.2	42.1
Incr Delay (d2), s/veh	1.5	0.6	0.3	2.8	7.1	7.0	17.4	0.8	0.1	21.1	1.6	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.6	5.3	1.5	2.3	1.9	16.5	5.4	0.6	1.1	4.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	55.3	24.9	61.4	66.4	66.2	60.4	17.7	13.7	83.4	41.8	48.3
LnGrp LOS	E	E	C	E	E	E	E	B	B	F	D	D
Approach Vol, veh/h		686			161			1631			522	
Approach Delay, s/veh		33.7			65.0			42.1			46.3	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	78.3		15.0	48.9	39.9		26.1				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	6.1	65.1		8.0	43.2	28.1		24.0				
Max Q Clear Time (g_c+I1), s	3.9	18.7		6.4	41.1	18.0		18.4				
Green Ext Time (p_c), s	0.0	10.1		0.1	1.0	3.1		1.7				

Intersection Summary			
HCM 6th Ctrl Delay		42.2	
HCM 6th LOS		D	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	268	746	32	144	373
Future Volume (veh/h)	90	268	746	32	144	373
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	95	0	785	34	152	393
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	249		1225	655	502	1908
Arrive On Green	0.14	0.00	0.41	0.41	0.13	0.64
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	95	0	785	34	152	393
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	2.6	0.0	11.6	0.7	2.1	3.0
Cycle Q Clear(g_c), s	2.6	0.0	11.6	0.7	2.1	3.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	249		1225	655	502	1908
V/C Ratio(X)	0.38		0.64	0.05	0.30	0.21
Avail Cap(c_a), veh/h	339		1833	981	547	2593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	12.8	9.6	7.4	4.0
Incr Delay (d2), s/veh	1.0	0.0	1.2	0.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	3.1	0.2	0.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.3	0.0	14.0	9.7	7.7	4.1
LnGrp LOS	C		B	A	A	A
Approach Vol, veh/h	95	A	819			545
Approach Delay, s/veh	22.3		13.8			5.1
Approach LOS	C		B			A

Timer - Assigned Phs	2		5	6	8
Phs Duration (G+Y+Rc), s	41.4		12.6	28.8	13.2
Change Period (Y+Rc), s	6.2		5.4	6.2	5.6
Max Green Setting (Gmax), s	47.8		8.6	33.8	10.4
Max Q Clear Time (g_c+I1), s	5.0		4.1	13.6	4.6
Green Ext Time (p_c), s	5.2		0.1	9.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	718	44	21	1191	4	49	1	20	1	1	5
Future Volume (veh/h)	2	718	44	21	1191	4	49	1	20	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	756	46	22	1254	4	52	1	21	1	1	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	367	2081	127	571	2240	1134	55	1	206	42	29	206
Arrive On Green	0.01	1.00	1.00	0.05	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	2998	182	1781	3131	1585	0	4	1585	0	221	1585
Grp Volume(v), veh/h	2	395	407	22	1254	4	53	0	21	2	0	5
Grp Sat Flow(s),veh/h/ln	1781	1566	1615	1781	1566	1585	4	0	1585	221	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.5	0.0	0.0	16.9	0.0	1.5	16.9	0.0	0.4
Prop In Lane	1.00		0.11	1.00		1.00	0.98		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	367	1086	1121	571	2240	1134	55	0	206	70	0	206
V/C Ratio(X)	0.01	0.36	0.36	0.04	0.56	0.00	0.96	0.00	0.10	0.03	0.00	0.02
Avail Cap(c_a), veh/h	474	1086	1121	640	2240	1134	55	0	206	70	0	206
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.50	0.50	0.50	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.9	0.0	0.0	5.1	0.0	0.0	64.8	0.0	49.9	50.1	0.0	49.4
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	0.5	0.0	104.7	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.1	0.2	0.0	3.4	0.0	0.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.0	0.9	0.9	5.1	0.5	0.0	169.5	0.0	50.1	50.3	0.0	49.4
LnGrp LOS	A	A	A	A	A	A	F	A	D	D	A	D
Approach Vol, veh/h		804			1280			74			7	
Approach Delay, s/veh		0.9			0.6			135.6			49.6	
Approach LOS		A			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	97.0		24.0	6.2	99.8		24.0
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1
Max Green Setting (Gmax), s	* 8.3	* 85		16.9	* 8.2	* 85		16.9
Max Q Clear Time (g_c+I1), s	2.5	2.0		18.9	2.0	2.0		18.9
Green Ext Time (p_c), s	0.0	12.5		0.0	0.0	29.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	748	29	11	1218	35	14	4	6	38	7	165
Future Volume (veh/h)	105	748	29	11	1218	35	14	4	6	38	7	165
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	771	30	11	1256	36	14	4	6	39	7	170
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	399	1814	71	501	1929	976	36	10	16	185	33	193
Arrive On Green	0.09	1.00	1.00	0.03	1.00	1.00	0.04	0.04	0.04	0.12	0.12	0.12
Sat Flow, veh/h	1781	2824	110	1781	3131	1585	1016	290	435	1521	273	1585
Grp Volume(v), veh/h	108	393	408	11	1256	36	24	0	0	46	0	170
Grp Sat Flow(s),veh/h/ln	1781	1439	1495	1781	1566	1585	1741	0	0	1794	0	1585
Q Serve(g_s), s	2.9	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	3.0	0.0	13.7
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	3.0	0.0	13.7
Prop In Lane	1.00		0.07	1.00		1.00	0.58		0.25	0.85		1.00
Lane Grp Cap(c), veh/h	399	924	960	501	1929	976	62	0	0	218	0	193
V/C Ratio(X)	0.27	0.43	0.43	0.02	0.65	0.04	0.39	0.00	0.00	0.21	0.00	0.88
Avail Cap(c_a), veh/h	442	924	960	563	1929	976	130	0	0	235	0	207
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.86	0.86	0.86	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	0.0	8.8	0.0	0.0	61.3	0.0	0.0	51.5	0.0	56.2
Incr Delay (d2), s/veh	0.3	1.2	1.1	0.0	1.5	0.1	3.9	0.0	0.0	0.5	0.0	31.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.3	0.3	0.1	0.4	0.0	0.8	0.0	0.0	1.4	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	1.2	1.1	8.8	1.5	0.1	65.2	0.0	0.0	52.0	0.0	87.7
LnGrp LOS	A	A	A	A	A	A	E	A	A	D	A	F
Approach Vol, veh/h		909			1303			24			216	
Approach Delay, s/veh		1.9			1.5			65.2			80.1	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	89.8		21.8	10.9	86.4		10.9
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 73		17.0	9.0	* 71		9.7
Max Q Clear Time (g_c+I1), s	2.3	2.0		15.7	4.9	2.0		3.8
Green Ext Time (p_c), s	0.0	12.5		0.1	0.1	28.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	833	213	15	1293	53	271	11	15	20	12	95
Future Volume (veh/h)	76	833	213	15	1293	53	271	11	15	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	877	0	16	1361	56	309	0	0	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	358	1763		467	1707	940	367	192	0	88	55	125
Arrive On Green	0.09	1.00	0.00	0.04	1.00	1.00	0.10	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1121	694	1585
Grp Volume(v), veh/h	80	877	0	16	1361	56	309	0	0	34	0	100
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1814	0	1585
Q Serve(g_s), s	2.2	0.0	0.0	0.5	0.0	0.0	11.1	0.0	0.0	2.3	0.0	8.1
Cycle Q Clear(g_c), s	2.2	0.0	0.0	0.5	0.0	0.0	11.1	0.0	0.0	2.3	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.62		1.00
Lane Grp Cap(c), veh/h	358	1763		467	1707	940	367	192	0	143	0	125
V/C Ratio(X)	0.22	0.50		0.03	0.80	0.06	0.84	0.00	0.00	0.24	0.00	0.80
Avail Cap(c_a), veh/h	376	1763		520	1707	940	430	226	0	293	0	256
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.75	0.75	0.75	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	0.0	9.6	0.0	0.0	57.3	0.0	0.0	56.2	0.0	58.9
Incr Delay (d2), s/veh	0.3	0.9	0.0	0.0	2.4	0.0	12.5	0.0	0.0	0.8	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.0	0.2	0.6	0.0	5.7	0.0	0.0	1.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.9	0.0	9.6	2.4	0.0	69.8	0.0	0.0	57.1	0.0	70.0
LnGrp LOS	A	A		A	A	A	E	A	A	E	A	E
Approach Vol, veh/h		957	A		1433			309			134	
Approach Delay, s/veh		1.6			2.4			69.8			66.7	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	86.0		16.2	10.7	83.4		19.7
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 63		21.0	7.0	* 63		15.7
Max Q Clear Time (g_c+I1), s	2.5	2.0		10.1	4.2	2.0		13.1
Green Ext Time (p_c), s	0.0	15.3		0.3	0.0	31.3		0.3

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	552	983	0	0	1334	363	43	0	144	0	0	0
Future Volume (veh/h)	552	983	0	0	1334	363	43	0	144	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	600	1068	0	0	1450	395	47	0	157			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	541	2369	0	0	1483	817	136	0	121			
Arrive On Green	0.54	1.00	0.00	0.00	0.52	0.52	0.08	0.00	0.08			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	600	1068	0	0	1450	395	47	0	157			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	35.0	0.0	0.0	0.0	64.0	20.9	3.3	0.0	9.9			
Cycle Q Clear(g_c), s	35.0	0.0	0.0	0.0	64.0	20.9	3.3	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	541	2369	0	0	1483	817	136	0	121			
V/C Ratio(X)	1.11	0.45	0.00	0.00	0.98	0.48	0.35	0.00	1.30			
Avail Cap(c_a), veh/h	541	2391	0	0	1483	817	136	0	121			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.27	0.27	0.00	0.00	0.39	0.39	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.1	0.0	0.0	0.0	30.8	20.3	57.0	0.0	60.1			
Incr Delay (d2), s/veh	57.1	0.2	0.0	0.0	10.2	0.8	1.5	0.0	183.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	17.2	0.1	0.0	0.0	22.5	7.5	1.5	0.0	10.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.2	0.2	0.0	0.0	41.0	21.1	58.5	0.0	243.0			
LnGrp LOS	F	A	A	A	D	C	E	A	F			
Approach Vol, veh/h		1668			1845			204				
Approach Delay, s/veh		29.7			36.8			200.5				
Approach LOS		C			D			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			40.0	74.0		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			37.0	66.0		11.9				
Green Ext Time (p_c), s		22.8			0.0	1.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1356	74	135	1248	0	0	0	0	194	0	536
Future Volume (veh/h)	0	1356	74	135	1248	0	0	0	0	194	0	536
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1490	81	148	1371	0				213	0	589
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1675	91	334	1999	0				748	0	666
Arrive On Green	0.00	1.00	1.00	0.03	0.47	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2852	150	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	770	801	148	1371	0				213	0	589
Grp Sat Flow(s),veh/h/ln	0	1439	1488	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.9	48.6	0.0				6.5	0.0	23.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.9	48.6	0.0				6.5	0.0	23.4
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	868	898	334	1999	0				748	0	666
V/C Ratio(X)	0.00	0.89	0.89	0.44	0.69	0.00				0.28	0.00	0.88
Avail Cap(c_a), veh/h	0	868	898	364	1999	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.76	0.76	0.13	0.13	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.1	23.6	0.0				43.1	0.0	49.8
Incr Delay (d2), s/veh	0.0	10.3	10.4	0.0	0.3	0.0				0.2	0.0	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	2.6	1.4	17.1	0.0				2.9	0.0	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.3	10.4	8.2	23.9	0.0				43.4	0.0	61.6
LnGrp LOS	A	B	B	A	C	A				D	A	E
Approach Vol, veh/h		1571			1519						802	
Approach Delay, s/veh		10.3			22.3						56.7	
Approach LOS		B			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	84.3		33.8		96.2
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	5.9	2.0		25.4		50.6
Green Ext Time (p_c), s	0.0	40.4		1.9		22.9

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1243	27	92	1602	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1243	27	92	1602	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	1366	30	101	1760	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	282	2354	1150	389	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	1366	30	101	1760	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	2354	1150	389	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.12	0.58	0.03	0.26	0.74	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	303	2354	1150	418	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.54	0.54	0.54	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.1	1.1	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.0	0.5	0.4	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	0.8	0.0	4.1	1.1	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		1431			1913			114			179	
Approach Delay, s/veh		0.8			1.3			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	6.3	* 84		* 21	4.4	* 86		* 21
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8
Green Ext Time (p_c), s	0.0	34.6		0.5	0.0	54.4		0.2

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1048	84	31	1391	241	76	28	30	240	27	280
Future Volume (veh/h)	167	1048	84	31	1391	241	76	28	30	240	27	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	1139	91	34	1512	262	83	30	33	261	29	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	312	1843	901	354	1720	841	225	68	75	340	301	255
Arrive On Green	0.13	1.00	1.00	0.07	1.00	1.00	0.05	0.08	0.08	0.12	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	1781	1870	1585
Grp Volume(v), veh/h	182	1139	91	34	1512	262	83	0	63	261	29	304
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1781	1870	1585
Q Serve(g_s), s	6.2	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Cycle Q Clear(g_c), s	6.2	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	312	1843	901	354	1720	841	225	0	143	340	301	255
V/C Ratio(X)	0.58	0.62	0.10	0.10	0.88	0.31	0.37	0.00	0.44	0.77	0.10	1.19
Avail Cap(c_a), veh/h	358	1843	901	378	1720	841	225	0	143	340	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.61	0.61	0.61	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	0.0	0.0	12.2	0.0	0.0	51.6	0.0	56.6	46.8	46.5	54.6
Incr Delay (d2), s/veh	1.4	1.2	0.2	0.1	4.3	0.6	1.0	0.0	4.5	10.1	0.3	118.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.3	0.0	0.4	1.0	0.1	2.6	0.0	2.2	8.5	0.8	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	1.2	0.2	12.3	4.3	0.6	52.6	0.0	61.1	56.9	46.8	173.3
LnGrp LOS	B	A	A	B	A	A	D	A	E	E	D	F
Approach Vol, veh/h		1412			1808			146			594	
Approach Delay, s/veh		2.6			3.9			56.3			116.0	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	14.7	75.3	22.0	18.0
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.3	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	13.1	2.0	7.5	22.9	8.2	2.0	18.0	6.6
Green Ext Time (p_c), s	0.0	25.2	0.0	0.0	0.1	40.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	680	1195	0	0	1047	761	304	0	216	0	0	0
Future Volume (veh/h)	680	1195	0	0	1047	761	304	0	216	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	747	1313	0	0	1151	0	334	0	237			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	624	2298	0	0	1125		341	0	304			
Arrive On Green	0.11	0.23	0.00	0.00	0.69	0.00	0.19	0.00	0.19			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	747	1313	0	0	1151	0	334	0	237			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	46.5	0.0	0.0	45.1	0.0	24.3	0.0	18.5			
Cycle Q Clear(g_c), s	41.5	46.5	0.0	0.0	45.1	0.0	24.3	0.0	18.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	624	2298	0	0	1125		341	0	304			
V/C Ratio(X)	1.20	0.57	0.00	0.00	1.02		0.98	0.00	0.78			
Avail Cap(c_a), veh/h	624	2298	0	0	1125		341	0	304			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.46	0.46	0.00	0.00	0.38	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	52.6	32.3	0.0	0.0	19.9	0.0	52.3	0.0	50.0			
Incr Delay (d2), s/veh	96.1	0.5	0.0	0.0	22.6	0.0	42.8	0.0	11.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	38.3	20.2	0.0	0.0	10.8	0.0	14.4	0.0	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.7	32.8	0.0	0.0	42.5	0.0	95.1	0.0	61.2			
LnGrp LOS	F	C	A	A	F		F	A	E			
Approach Vol, veh/h		2060			1151	A		571				
Approach Delay, s/veh		74.9			42.5			81.0				
Approach LOS		E			D			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		99.0			47.0	52.0		31.0				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		48.5			43.5	47.1		26.3				
Green Ext Time (p_c), s		24.0			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	65.9
HCM 6th LOS	E

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1499	323	117	1185	0	0	0	0	391	0	266
Future Volume (veh/h)	0	1499	323	117	1185	0	0	0	0	391	0	266
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1666	359	130	1317	0				434	0	296
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2020	987	268	2313	0				680	0	302
Arrive On Green	0.00	1.00	1.00	0.06	0.95	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1666	359	130	1317	0				434	0	296
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.3	5.9	0.0				14.6	0.0	24.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.3	5.9	0.0				14.6	0.0	24.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2020	987	268	2313	0				680	0	302
V/C Ratio(X)	0.00	0.82	0.36	0.49	0.57	0.00				0.64	0.00	0.98
Avail Cap(c_a), veh/h	0	2020	987	312	2313	0				680	0	302
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	6.9	1.1	0.0				48.5	0.0	52.3
Incr Delay (d2), s/veh	0.0	0.4	0.1	0.1	0.1	0.0				2.0	0.0	45.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	1.1	0.9	0.0				6.4	0.0	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.4	0.1	7.1	1.2	0.0				50.5	0.0	98.2
LnGrp LOS	A	A	A	A	A	A				D	A	F
Approach Vol, veh/h		2025			1447						730	
Approach Delay, s/veh		0.3			1.7						69.8	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	87.3		31.0		99.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.3	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.3	2.0		26.2		7.9
Green Ext Time (p_c), s	0.1	53.6		0.0		32.0

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	79	881	73	51	245	953	138	69	191	702	143	82
Future Volume (veh/h)	79	881	73	51	245	953	138	69	191	702	143	82
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			No
Adj Sat Flow, veh/h/ln	1870	1663	1870		1870	1707	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	968	80		269	1047	152	76	210	771	157	90
Peak Hour Factor	0.91	0.91	0.91		0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2		2	13	2	2	2	2	2	2
Cap, veh/h	153	926	465		308	1097	536	149	1241	554	167	1273
Arrive On Green	0.09	0.59	0.59		0.18	0.68	0.68	0.04	0.35	0.35	0.05	0.36
Sat Flow, veh/h	3456	3159	1585		3456	3244	1585	3456	3554	1585	3456	3554
Grp Volume(v), veh/h	87	968	80		269	1047	152	76	210	771	157	90
Grp Sat Flow(s),veh/h/ln	1728	1580	1585		1728	1622	1585	1728	1777	1585	1728	1777
Q Serve(g_s), s	3.1	38.1	3.0		9.8	38.3	5.0	2.8	5.3	45.4	5.9	2.2
Cycle Q Clear(g_c), s	3.1	38.1	3.0		9.8	38.3	5.0	2.8	5.3	45.4	5.9	2.2
Prop In Lane	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	153	926	465		308	1097	536	149	1241	554	167	1273
V/C Ratio(X)	0.57	1.05	0.17		0.87	0.95	0.28	0.51	0.17	1.39	0.94	0.07
Avail Cap(c_a), veh/h	162	926	465		308	1097	536	159	1241	554	167	1273
HCM Platoon Ratio	2.00	2.00	2.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78		0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	26.9	19.6		52.7	20.1	14.7	60.8	29.3	42.3	61.7	27.5
Incr Delay (d2), s/veh	3.3	38.8	0.6		18.2	14.9	1.0	2.7	0.1	187.6	51.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	13.7	1.1		4.6	9.0	1.7	1.3	2.2	45.8	3.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	65.7	20.3		70.9	35.1	15.7	63.5	29.3	229.9	113.1	27.5
LnGrp LOS	E	F	C		E	D	B	E	C	F	F	C
Approach Vol, veh/h		1135				1468			1057			320
Approach Delay, s/veh		62.2				39.6			178.1			69.6
Approach LOS		E				D			F			E

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	51.1	12.5	53.2	19.1	45.2	13.7	52.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.1	40.3	4.8	6.0	11.8	40.1	7.9	47.4
Green Ext Time (p_c), s	0.0	2.7	0.0	0.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	85.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	66
Future Volume (veh/h)	66
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	73
Peak Hour Factor	0.91
Percent Heavy Veh, %	2
Cap, veh/h	568
Arrive On Green	0.36
Sat Flow, veh/h	1585
Grp Volume(v), veh/h	73
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	4.0
Cycle Q Clear(g_c), s	4.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	568
V/C Ratio(X)	0.13
Avail Cap(c_a), veh/h	568
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	28.1
Incr Delay (d2), s/veh	0.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	1.5
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	28.2
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	0	0	713	15	96	944	0	33	0	307	0	0	0
Future Volume (veh/h)	0	0	713	15	96	944	0	33	0	307	0	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach			No			No			No				
Adj Sat Flow, veh/h/ln		0	1663	1826	1826	1663	0	1856	1856	1856			
Adj Flow Rate, veh/h		0	792	17	107	1049	0	37	0	341			
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %		0	16	5	5	16	0	3	3	3			
Cap, veh/h		0	1267	621	380	1808	0	389	0	346			
Arrive On Green		0.00	0.40	0.40	0.16	1.00	0.00	0.22	0.00	0.22			
Sat Flow, veh/h		0	3243	1547	1739	3243	0	1767	0	1572			
Grp Volume(v), veh/h		0	792	17	107	1049	0	37	0	341			
Grp Sat Flow(s),veh/h/ln		0	1580	1547	1739	1580	0	1767	0	1572			
Q Serve(g_s), s		0.0	13.0	0.4	2.0	0.0	0.0	1.1	0.0	14.0			
Cycle Q Clear(g_c), s		0.0	13.0	0.4	2.0	0.0	0.0	1.1	0.0	14.0			
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h		0	1267	621	380	1808	0	389	0	346			
V/C Ratio(X)		0.00	0.63	0.03	0.28	0.58	0.00	0.10	0.00	0.99			
Avail Cap(c_a), veh/h		0	1267	621	403	1808	0	389	0	346			
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)		0.00	1.00	1.00	0.33	0.33	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh		0.0	15.6	11.8	9.4	0.0	0.0	20.2	0.0	25.2			
Incr Delay (d2), s/veh		0.0	2.3	0.1	0.1	0.5	0.0	0.1	0.0	44.4			
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln		0.0	4.2	0.1	0.6	0.1	0.0	0.4	0.0	9.0			
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh		0.0	17.9	11.9	9.6	0.5	0.0	20.3	0.0	69.6			
LnGrp LOS		A	B	B	A	A	A	C	A	E			
Approach Vol, veh/h			809			1156			378				
Approach Delay, s/veh			17.8			1.3			64.8				
Approach LOS			B			A			E				

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	44.0			11.1	32.9		21.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	37.2			6.0	25.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			4.0	15.0		16.0					
Green Ext Time (p_c), s	19.9			0.0	6.4		0.0					

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	174.4

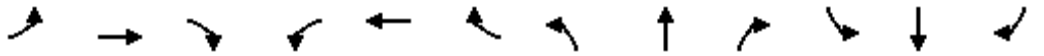
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	301	341	99	77	94
Future Vol, veh/h	200	301	341	99	77	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	328	493	559	162	126	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	721	0	-	0	1789	640
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	1149	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	876	-	-	-	~ 88	470
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	298	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	~ 43	470
Mov Cap-2 Maneuver	-	-	-	-	~ 43	-
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	298	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	$ 1120.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	876	-	-	-	86
HCM Lane V/C Ratio	0.374	-	-	-	3.26
HCM Control Delay (s)	11.5	0	-		$ 1120.9
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	1.8	-	-	-	28

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	244	52	107	290	567	46	355	90	187	74	15
Future Volume (veh/h)	30	244	52	107	290	567	46	355	90	187	74	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	274	58	120	326	637	52	399	101	210	83	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	226	597	506	334	592	502	568	466	395	372	568	482
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.25	0.25	0.12	0.30	0.30
Sat Flow, veh/h	583	1870	1585	1040	1856	1572	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	34	274	58	120	326	637	52	399	101	210	83	17
Grp Sat Flow(s),veh/h/ln	583	1870	1585	1040	1856	1572	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.0	6.8	1.5	6.0	8.4	18.5	1.2	11.8	3.0	4.9	1.9	0.4
Cycle Q Clear(g_c), s	11.4	6.8	1.5	12.8	8.4	18.5	1.2	11.8	3.0	4.9	1.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	597	506	334	592	502	568	466	395	372	568	482
V/C Ratio(X)	0.15	0.46	0.11	0.36	0.55	1.27	0.09	0.86	0.26	0.56	0.15	0.04
Avail Cap(c_a), veh/h	226	597	506	334	592	502	661	522	443	380	568	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	15.8	14.0	20.9	16.3	19.8	13.9	20.8	17.5	14.8	14.7	14.2
Incr Delay (d2), s/veh	0.7	1.2	0.2	1.4	1.9	136.5	0.1	12.3	0.3	1.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	0.5	1.4	3.2	24.5	0.4	5.9	1.0	1.8	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	16.9	14.2	22.3	18.2	156.3	14.0	33.0	17.8	16.6	14.8	14.2
LnGrp LOS	C	B	B	C	B	F	B	C	B	B	B	B
Approach Vol, veh/h		366			1083			552			310	
Approach Delay, s/veh		16.9			99.9			28.5			16.0	
Approach LOS		B			F			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	9.8	23.4		24.8	13.0	20.2				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		13.4	3.2	3.9		20.5	6.9	13.8				
Green Ext Time (p_c), s		1.4	0.0	0.3		0.0	0.0	0.6				

Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	367	68	93	666	43	187	29	126	62	36	95
Future Volume (veh/h)	26	367	68	93	666	43	187	29	126	62	36	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	417	77	106	757	49	212	33	143	70	41	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	209	724	614	444	803	680	326	78	338	301	116	305
Arrive On Green	0.04	0.39	0.39	0.09	0.43	0.43	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1767	1856	1572	1239	306	1326	1209	455	1199
Grp Volume(v), veh/h	30	417	77	106	757	49	212	0	176	70	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	1856	1572	1239	0	1632	1209	0	1654
Q Serve(g_s), s	0.7	12.4	2.2	2.4	27.6	1.3	12.0	0.0	6.4	3.6	0.0	5.2
Cycle Q Clear(g_c), s	0.7	12.4	2.2	2.4	27.6	1.3	17.2	0.0	6.4	10.0	0.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.72
Lane Grp Cap(c), veh/h	209	724	614	444	803	680	326	0	415	301	0	421
V/C Ratio(X)	0.14	0.58	0.13	0.24	0.94	0.07	0.65	0.00	0.42	0.23	0.00	0.35
Avail Cap(c_a), veh/h	306	820	695	466	814	689	326	0	415	306	0	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.0	17.1	14.0	11.6	19.2	11.7	28.6	0.0	22.0	26.2	0.0	21.6
Incr Delay (d2), s/veh	0.1	1.6	0.2	0.1	19.5	0.1	4.5	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.9	0.7	0.8	14.0	0.4	3.8	0.0	2.4	1.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	18.7	14.1	11.8	38.7	11.8	33.2	0.0	22.7	26.6	0.0	22.1
LnGrp LOS	B	B	B	B	D	B	C	A	C	C	A	C
Approach Vol, veh/h		524			912			388			219	
Approach Delay, s/veh		17.9			34.1			28.4			23.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	33.5		24.7	9.3	36.7		24.7
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7
Max Green Setting (Gmax), s	7.6	* 31		* 18	7.0	* 31		18.0
Max Q Clear Time (g_c+I1), s	14.4	14.4		12.0	2.7	29.6		19.2
Green Ext Time (p_c), s	0.0	4.4		0.6	0.0	0.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	157	410	20	171	26	302	345	16	21	272	172
Future Volume (veh/h)	202	157	410	20	171	26	302	345	16	21	272	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	224	174	456	22	190	29	336	383	18	23	302	191
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	412	539	456	328	329	50	358	522	25	261	404	343
Arrive On Green	0.10	0.29	0.29	0.03	0.21	0.21	0.11	0.29	0.29	0.03	0.22	0.22
Sat Flow, veh/h	1781	1870	1585	1767	1572	240	1781	1772	83	1753	1841	1560
Grp Volume(v), veh/h	224	174	456	22	0	219	336	0	401	23	302	191
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1812	1781	0	1855	1753	1841	1560
Q Serve(g_s), s	6.4	4.8	19.0	0.6	0.0	7.2	7.0	0.0	12.8	0.7	10.1	7.2
Cycle Q Clear(g_c), s	6.4	4.8	19.0	0.6	0.0	7.2	7.0	0.0	12.8	0.7	10.1	7.2
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	412	539	456	328	0	379	358	0	546	261	404	343
V/C Ratio(X)	0.54	0.32	1.00	0.07	0.00	0.58	0.94	0.00	0.73	0.09	0.75	0.56
Avail Cap(c_a), veh/h	412	539	456	440	0	492	358	0	574	365	541	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	18.4	23.5	19.3	0.0	23.5	22.0	0.0	21.0	19.2	24.0	22.9
Incr Delay (d2), s/veh	1.5	0.3	41.9	0.1	0.0	1.4	32.0	0.0	5.9	0.1	6.5	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.9	11.7	0.2	0.0	3.0	4.7	0.0	5.7	0.2	4.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	18.8	65.4	19.4	0.0	24.9	53.9	0.0	26.8	19.4	30.6	25.9
LnGrp LOS	B	B	E	B	A	C	D	A	C	B	C	C
Approach Vol, veh/h		854			241			737			516	
Approach Delay, s/veh		43.7			24.4			39.2			28.3	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	25.0	7.8	25.1	13.0	20.1	13.0	19.9
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.7	14.8	2.6	21.0	9.0	12.1	8.4	9.2
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	2.4	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	4	8	117	2	143	1	461	145	191	512	7
Future Volume (veh/h)	19	4	8	117	2	143	1	461	145	191	512	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1900	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	21	4	9	131	2	161	1	518	163	215	575	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	3	0	0	0	1	3	0	2	0
Cap, veh/h	45	13	5	207	3	252	559	1210	1009	585	1339	1153
Arrive On Green	0.08	0.08	0.08	0.04	0.16	0.16	0.00	0.64	0.64	0.08	0.72	0.72
Sat Flow, veh/h	0	155	56	1767	20	1593	1810	1885	1572	1810	1870	1610
Grp Volume(v), veh/h	34	0	0	131	0	163	1	518	163	215	575	8
Grp Sat Flow(s),veh/h/ln	210	0	0	1767	0	1613	1810	1885	1572	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	12.3	0.0	17.6	3.5	4.7	16.4	0.2
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.0	0.0	12.3	0.0	17.6	3.5	4.7	16.4	0.2
Prop In Lane	0.62		0.26	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	0	0	207	0	255	559	1210	1009	585	1339	1153
V/C Ratio(X)	0.55	0.00	0.00	0.63	0.00	0.64	0.00	0.43	0.16	0.37	0.43	0.01
Avail Cap(c_a), veh/h	141	0	0	344	0	484	721	1210	1009	696	1339	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	60.0	0.0	0.0	57.4	0.0	51.2	8.4	11.5	4.0	7.3	7.6	5.3
Incr Delay (d2), s/veh	15.2	0.0	0.0	3.2	0.0	5.6	0.0	1.1	0.3	0.4	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	4.3	0.0	5.3	0.0	7.1	1.8	1.5	5.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	0.0	0.0	60.5	0.0	56.8	8.4	12.6	4.4	7.7	8.4	5.3
LnGrp LOS	E	A	A	E	A	E	A	B	A	A	A	A
Approach Vol, veh/h		34			294			682			798	
Approach Delay, s/veh		75.2			58.5			10.6			8.1	
Approach LOS		E			E			B			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	88.4	11.0	15.6	5.4	98.1		26.6
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0		* 6
Max Green Setting (Gmax), s	10.0	58.0	15.0	18.0	12.0	64.0		* 39
Max Q Clear Time (g_c+I1), s	10.7	19.6	2.0	12.6	2.0	18.4		14.3
Green Ext Time (p_c), s	0.7	8.6	0.2	0.1	0.0	8.4		1.7

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

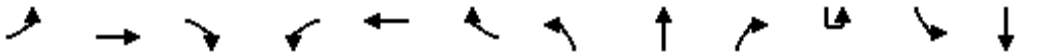
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	332	217	45	52	26
Future Vol, veh/h	26	332	217	45	52	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	386	252	52	60	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	304	0	-	0	724	278
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	446	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1257	-	-	-	393	761
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	645	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1257	-	-	-	381	761
Mov Cap-2 Maneuver	-	-	-	-	381	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	645	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1257	-	-	-	457
HCM Lane V/C Ratio	0.024	-	-	-	0.198
HCM Control Delay (s)	7.9	0	-	-	14.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	104	11	277	57	23	11	151	442	18	38	3	666
Future Volume (veh/h)	104	11	277	57	23	11	151	442	18	38	3	666
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1900	1870	1826	1826		1900	1826
Adj Flow Rate, veh/h	114	12	304	63	25	12	166	486	20		3	732
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		0.91	0.91
Percent Heavy Veh, %	0	0	1	0	0	0	2	5	5		0	5
Cap, veh/h	109	6	458	98	24	462	383	1432	59		418	1167
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.09	0.42	0.42		0.00	0.34
Sat Flow, veh/h	0	22	1598	0	84	1610	1781	3396	140		1810	3469
Grp Volume(v), veh/h	126	0	304	88	0	12	166	248	258		3	732
Grp Sat Flow(s),veh/h/ln	22	0	1598	84	0	1610	1781	1735	1801		1810	1735
Q Serve(g_s), s	0.0	0.0	10.5	0.0	0.0	0.3	3.6	6.1	6.1		0.1	11.1
Cycle Q Clear(g_c), s	18.0	0.0	10.5	18.0	0.0	0.3	3.6	6.1	6.1		0.1	11.1
Prop In Lane	0.90		1.00	0.72		1.00	1.00		0.08		1.00	
Lane Grp Cap(c), veh/h	116	0	458	122	0	462	383	732	760		418	1167
V/C Ratio(X)	1.09	0.00	0.66	0.72	0.00	0.03	0.43	0.34	0.34		0.01	0.63
Avail Cap(c_a), veh/h	116	0	458	122	0	462	449	856	889		640	1713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	30.4	0.0	19.7	26.6	0.0	16.1	12.2	12.2	12.3		13.6	17.5
Incr Delay (d2), s/veh	110.0	0.0	3.6	18.4	0.0	0.0	0.6	0.6	0.6		0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	4.1	1.9	0.0	0.1	1.2	2.0	2.1		0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.4	0.0	23.3	45.0	0.0	16.1	12.8	12.8	12.8		13.7	18.7
LnGrp LOS	F	A	C	D	A	B	B	B	B		B	B
Approach Vol, veh/h		430			100			672				810
Approach Delay, s/veh		57.6			41.5			12.8				18.3
Approach LOS		E			D			B				B

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	32.5		24.0	11.7	27.1		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	31.0		18.0	8.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	8.1		20.0	5.6	13.1		20.0				
Green Ext Time (p_c), s	0.0	5.3		0.0	0.1	8.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		26.0
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	68
Future Volume (veh/h)	68
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1841
Adj Flow Rate, veh/h	75
Peak Hour Factor	0.91
Percent Heavy Veh, %	4
Cap, veh/h	525
Arrive On Green	0.34
Sat Flow, veh/h	1560
Grp Volume(v), veh/h	75
Grp Sat Flow(s),veh/h/ln	1560
Q Serve(g_s), s	2.1
Cycle Q Clear(g_c), s	2.1
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	525
V/C Ratio(X)	0.14
Avail Cap(c_a), veh/h	770
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	14.5
Incr Delay (d2), s/veh	0.3
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.7
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	14.8
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	140	0	0	3	37	536	3	1	713	99
Future Vol, veh/h	0	0	140	0	0	3	37	536	3	1	713	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	0	7	0	0	0	5	5	0	0	5	5
Mvmt Flow	0	0	151	0	0	3	40	576	3	1	767	106

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	384	-	-	288	873	0	0	579	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.04	-	-	6.9	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.37	-	-	3.3	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	600	0	0	715	750	-	-	1005	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	600	-	-	715	750	-	-	1005	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13	10.1	0.6	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	750	-	-	600	715	1005	-	-
HCM Lane V/C Ratio	0.053	-	-	0.251	0.005	0.001	-	-
HCM Control Delay (s)	10.1	-	-	13	10.1	8.6	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	0	0	-	-

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	130	6	5	121	4	6	66	9	5	72	90
Future Vol, veh/h	61	130	6	5	121	4	6	66	9	5	72	90
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	2	0	0	8	0	0	2	14	0	2	0
Mvmt Flow	77	165	8	6	153	5	8	84	11	6	91	114
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	9.5	9.1	9.7
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	31%	4%	3%
Vol Thru, %	81%	66%	93%	43%
Vol Right, %	11%	3%	3%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	197	130	167
LT Vol	6	61	5	5
Through Vol	66	130	121	72
RT Vol	9	6	4	90
Lane Flow Rate	103	249	165	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.147	0.345	0.227	0.278
Departure Headway (Hd)	5.144	4.977	4.97	4.737
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	716	714	750
Service Time	3.236	3.058	3.059	2.816
HCM Lane V/C Ratio	0.149	0.348	0.231	0.281
HCM Control Delay	9.1	10.7	9.5	9.7
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.5	1.5	0.9	1.1

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	117	49	13	216	54	63	7	18	16	5	1
Future Vol, veh/h	4	117	49	13	216	54	63	7	18	16	5	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	124	52	14	230	57	67	7	19	17	5	1
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.2	10.5	9	8.6
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	72%	100%	0%	100%	0%	73%
Vol Thru, %	8%	0%	70%	0%	80%	23%
Vol Right, %	20%	0%	30%	0%	20%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	4	166	13	270	22
LT Vol	63	4	0	13	0	16
Through Vol	7	0	117	0	216	5
RT Vol	18	0	49	0	54	1
Lane Flow Rate	94	4	177	14	287	23
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.133	0.007	0.24	0.021	0.387	0.035
Departure Headway (Hd)	5.128	5.601	4.89	5.495	4.852	5.338
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	697	639	733	651	741	668
Service Time	3.171	3.336	2.625	3.228	2.585	3.389
HCM Lane V/C Ratio	0.135	0.006	0.241	0.022	0.387	0.034
HCM Control Delay	9	8.4	9.2	8.3	10.6	8.6
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.5	0	0.9	0.1	1.8	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	8	563	5	4	413
Future Vol, veh/h	12	8	563	5	4	413
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	13	9	626	6	4	459

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1093	626	0	0	632	0
Stage 1	626	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	237	484	-	-	941	-
Stage 1	533	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	236	484	-	-	941	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	533	-	-	-	-	-
Stage 2	627	-	-	-	-	-

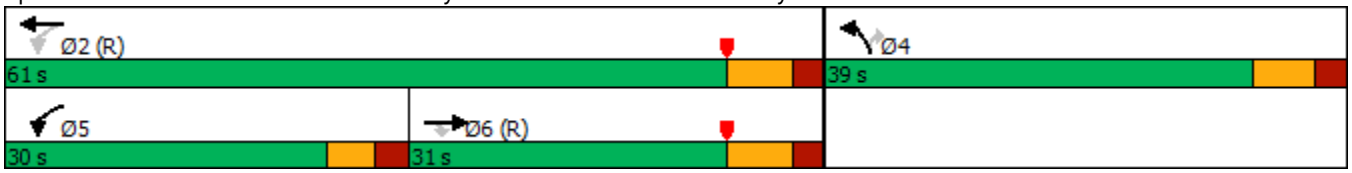
Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	297	941	-
HCM Lane V/C Ratio	-	-	0.075	0.005	-
HCM Control Delay (s)	-	-	18.1	8.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	599	368	463	1014	434	328
Future Volume (vph)	599	368	463	1014	434	328
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	23.7	23.7	54.9	53.7	31.9	31.9
Actuated g/C Ratio	0.24	0.24	0.55	0.54	0.32	0.32
v/c Ratio	0.94	0.65	1.11	0.67	1.03	0.55
Control Delay	61.6	9.0	100.5	19.3	83.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	9.0	100.5	19.3	83.9	6.3
LOS	E	A	F	B	F	A
Approach Delay	41.6			44.7	50.5	
Approach LOS	D			D	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 45.2	Intersection LOS: D
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	651	400	503	1102	472	357
v/c Ratio	0.94	0.65	1.11	0.67	1.03	0.55
Control Delay	61.6	9.0	100.5	19.3	83.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	9.0	100.5	19.3	83.9	6.3
Queue Length 50th (ft)	215	0	~308	254	~322	0
Queue Length 95th (ft)	#328	86	#511	327	#516	68
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	689	613	454	1642	460	655
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.65	1.11	0.67	1.03	0.55

Intersection Summary

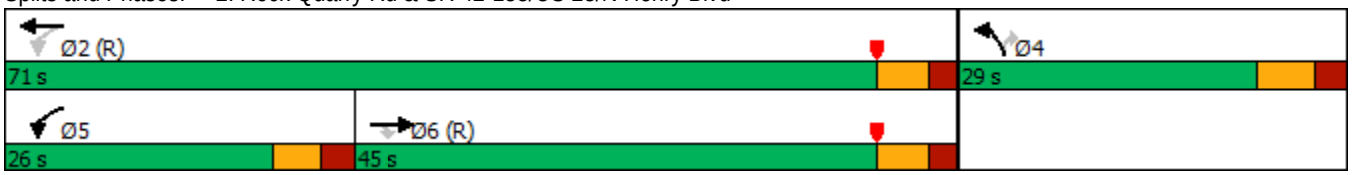
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	812	223	424	1323	174	395
Future Volume (vph)	812	223	424	1323	174	395
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	41.6	41.6	66.7	66.6	20.4	20.4
Actuated g/C Ratio	0.42	0.42	0.67	0.67	0.20	0.20
v/c Ratio	0.70	0.30	0.87	0.72	0.51	0.64
Control Delay	18.2	3.3	33.9	13.6	40.7	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	3.3	33.9	13.6	40.7	8.9
LOS	B	A	C	B	D	A
Approach Delay	14.9			18.5	18.7	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	855	235	446	1393	183	416
v/c Ratio	0.70	0.30	0.87	0.72	0.51	0.64
Control Delay	18.2	3.3	33.9	13.6	40.7	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	3.3	33.9	13.6	40.7	8.9
Queue Length 50th (ft)	128	1	145	264	105	4
Queue Length 95th (ft)	213	34	#328	370	170	87
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1220	795	536	1938	391	667
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.30	0.83	0.72	0.47	0.62

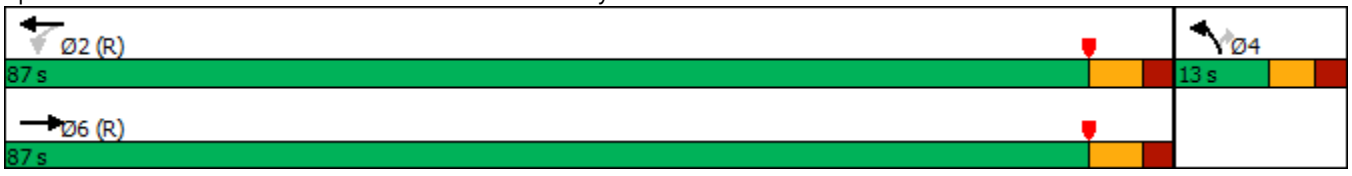
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1030	9	1503	10	2
Future Volume (vph)	1030	9	1503	10	2
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	87.0	87.0	87.0	13.0	13.0
Total Split (%)	87.0%	87.0%	87.0%	13.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	96.1	96.1	96.1	6.2	6.2
Actuated g/C Ratio	0.96	0.96	0.96	0.06	0.06
v/c Ratio	0.38	0.02	0.54	0.09	0.02
Control Delay	1.8	0.3	1.4	45.7	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	1.8	0.3	1.4	45.7	31.5
LOS	A	A	A	D	C
Approach Delay	1.8		1.4	43.3	
Approach LOS	A		A	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 1.7	Intersection LOS: A
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1060	9	1534	10	2
v/c Ratio	0.38	0.02	0.54	0.09	0.02
Control Delay	1.8	0.3	1.4	45.7	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	1.8	0.3	1.4	45.7	31.5
Queue Length 50th (ft)	0	0	0	6	0
Queue Length 95th (ft)	m186	m0	13	23	7
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2822	483	2821	124	113
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.02	0.54	0.08	0.02

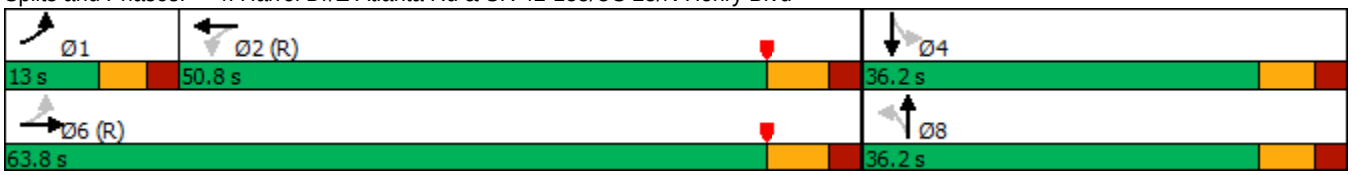
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	191	748	18	1302	71	33	279	6
Future Volume (vph)	191	748	18	1302	71	33	279	6
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	13.0	63.8	50.8	50.8	36.2	36.2	36.2	36.2
Total Split (%)	13.0%	63.8%	50.8%	50.8%	36.2%	36.2%	36.2%	36.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	57.8	56.7	43.7	43.7		29.5		29.5
Actuated g/C Ratio	0.58	0.57	0.44	0.44		0.30		0.30
v/c Ratio	1.14	0.51	0.07	1.23		0.41		1.29
Control Delay	124.4	10.2	22.2	136.0		26.8		182.9
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	124.4	10.2	22.2	136.0		26.8		182.9
LOS	F	B	C	F		C		F
Approach Delay		31.7		134.6		26.8		182.9
Approach LOS		C		F		C		F

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 102.2	Intersection LOS: F
Intersection Capacity Utilization 100.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	199	860	19	1572	167	440
v/c Ratio	1.14	0.51	0.07	1.23	0.41	1.29
Control Delay	124.4	10.2	22.2	136.0	26.8	182.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.4	10.2	22.2	136.0	26.8	182.9
Queue Length 50th (ft)	~98	224	6	~636	70	~350
Queue Length 95th (ft)	m#203	202	m16	#780	132	#544
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	174	1687	267	1277	412	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.51	0.07	1.23	0.41	1.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

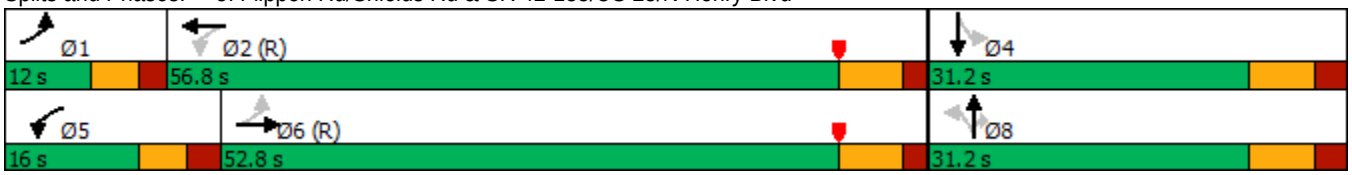
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

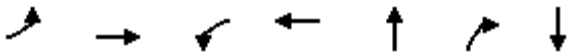
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	5	856	188	1509	230	16	191	27	46
Future Volume (vph)	5	856	188	1509	230	16	191	27	46
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	55.0	47.9	63.5	60.8		22.7	22.7		22.7
Actuated g/C Ratio	0.55	0.48	0.64	0.61		0.23	0.23		0.23
v/c Ratio	0.03	0.74	0.60	0.89		0.85	0.46		0.30
Control Delay	7.6	25.4	11.0	11.8		62.0	19.9		29.9
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	7.6	25.4	11.0	11.8		62.0	19.9		29.9
LOS	A	C	B	B		E	B		C
Approach Delay		25.3		11.7		43.6			29.9
Approach LOS		C		B		D			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	5	1017	198	1595	259	201	97
v/c Ratio	0.03	0.74	0.60	0.89	0.85	0.46	0.30
Control Delay	7.6	25.4	11.0	11.8	62.0	19.9	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	25.4	11.0	11.8	62.0	19.9	29.9
Queue Length 50th (ft)	1	272	14	64	156	52	44
Queue Length 95th (ft)	5	357	m14	m467	#288	120	90
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	189	1369	339	1799	320	453	339
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.74	0.58	0.89	0.81	0.44	0.29

Intersection Summary

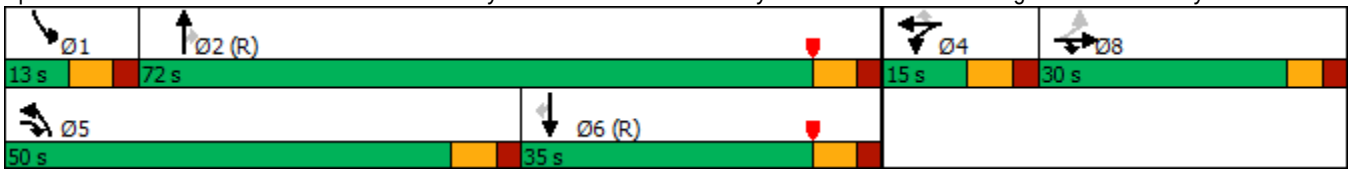
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	78	475	41	62	51	900	620	45	25	286	190
Future Volume (vph)	106	78	475	41	62	51	900	620	45	25	286	190
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	30.0	30.0		15.0	15.0	15.0	50.0	72.0	72.0	13.0	35.0	35.0
Total Split (%)	23.1%	23.1%		11.5%	11.5%	11.5%	38.5%	55.4%	55.4%	10.0%	26.9%	26.9%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	21.2	21.2	73.1	9.6	9.6	9.6	45.0	73.8	73.8	7.8	30.5	30.5
Actuated g/C Ratio	0.16	0.16	0.56	0.07	0.07	0.07	0.35	0.57	0.57	0.06	0.23	0.23
v/c Ratio	0.58	0.27	0.36	0.33	0.48	0.18	0.91	0.39	0.05	0.25	0.43	0.42
Control Delay	44.9	31.4	17.0	64.3	69.7	1.3	53.5	19.1	0.1	65.2	46.9	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	31.4	17.0	64.3	69.7	1.3	53.5	19.1	0.1	65.2	46.9	8.5
LOS	D	C	B	E	E	A	D	B	A	E	D	A
Approach Delay		23.2			45.7			38.3			33.3	
Approach LOS		C			D			D			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 34.4	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	110	81	495	43	65	53	938	646	47	26	298	198
v/c Ratio	0.58	0.27	0.36	0.33	0.48	0.18	0.91	0.39	0.05	0.25	0.43	0.42
Control Delay	44.9	31.4	17.0	64.3	69.7	1.3	53.5	19.1	0.1	65.2	46.9	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	31.4	17.0	64.3	69.7	1.3	53.5	19.1	0.1	65.2	46.9	8.5
Queue Length 50th (ft)	93	65	168	35	53	0	359	189	0	21	124	0
Queue Length 95th (ft)	121	74	292	76	#106	0	#528	231	0	54	164	65
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	214	344	1356	130	136	299	1045	1673	976	105	739	496
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.24	0.37	0.33	0.48	0.18	0.90	0.39	0.05	0.25	0.40	0.40

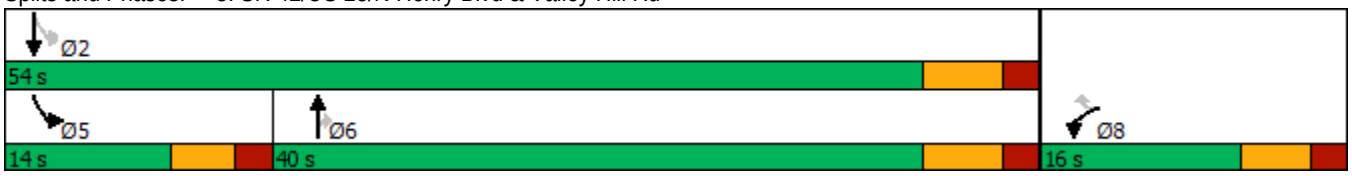
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	90	268	746	32	144	373
Future Volume (vph)	90	268	746	32	144	373
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	40.0	40.0	14.0	54.0
Total Split (%)	22.9%	22.9%	57.1%	57.1%	20.0%	77.1%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.6	10.6	23.7	23.7	34.8	34.0
Actuated g/C Ratio	0.19	0.19	0.42	0.42	0.61	0.60
v/c Ratio	0.29	0.54	0.64	0.05	0.32	0.22
Control Delay	26.8	8.4	16.4	4.2	5.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	8.4	16.4	4.2	5.7	5.0
LOS	C	A	B	A	A	A
Approach Delay	13.0		15.9			5.2
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 56.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	95	282	785	34	152	393
v/c Ratio	0.29	0.54	0.64	0.05	0.32	0.22
Control Delay	26.8	8.4	16.4	4.2	5.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	8.4	16.4	4.2	5.7	5.0
Queue Length 50th (ft)	30	0	116	0	17	26
Queue Length 95th (ft)	78	62	168	13	34	41
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	339	531	1828	998	483	2405
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.53	0.43	0.03	0.31	0.16

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	718	21	1191	4	49	1	20	1	1	5
Future Volume (vph)	2	718	21	1191	4	49	1	20	1	1	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	14.0	92.0	14.0	92.0	92.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	70.8%	10.8%	70.8%	70.8%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	105.8	102.6	108.3	107.3	107.3		10.8	10.8		10.8	10.8
Actuated g/C Ratio	0.81	0.79	0.83	0.83	0.83		0.08	0.08		0.08	0.08
v/c Ratio	0.01	0.33	0.04	0.49	0.00		0.47	0.10		0.02	0.02
Control Delay	2.0	2.7	1.0	6.1	0.0		69.7	1.0		52.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	2.0	2.7	1.0	6.1	0.0		69.7	1.0		52.5	0.2
LOS	A	A	A	A	A		E	A		D	A
Approach Delay		2.7		6.0			50.2			15.1	
Approach LOS		A		A			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 36 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 63.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2	802	22	1254	4	53	21	2	5
v/c Ratio	0.01	0.33	0.04	0.49	0.00	0.47	0.10	0.02	0.02
Control Delay	2.0	2.7	1.0	6.1	0.0	69.7	1.0	52.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.0	2.7	1.0	6.1	0.0	69.7	1.0	52.5	0.2
Queue Length 50th (ft)	0	21	1	40	0	44	0	2	0
Queue Length 95th (ft)	m0	35	m1	m591	m0	85	0	10	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	400	2432	586	2546	1320	176	276	202	276
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	25	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.33	0.04	0.50	0.00	0.30	0.08	0.01	0.02

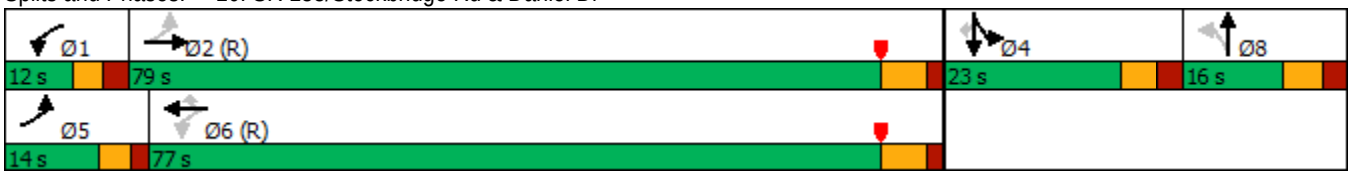
Intersection Summary

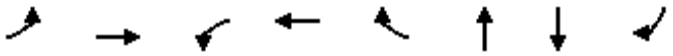
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	105	748	11	1218	35	14	4	7	165
Future Volume (vph)	105	748	11	1218	35	14	4	7	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	14.0	79.0	12.0	77.0	77.0	16.0	16.0	23.0	23.0
Total Split (%)	10.8%	60.8%	9.2%	59.2%	59.2%	12.3%	12.3%	17.7%	17.7%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	99.4	94.4	93.2	86.3	86.3		8.5	9.6	9.6
Actuated g/C Ratio	0.76	0.73	0.72	0.66	0.66		0.07	0.07	0.07
v/c Ratio	0.35	0.38	0.02	0.61	0.03		0.24	0.35	0.62
Control Delay	13.2	3.2	1.8	6.1	0.1		52.9	63.8	18.3
Queue Delay	0.0	0.0	0.0	0.9	0.0		0.0	0.0	0.3
Total Delay	13.2	3.2	1.8	6.9	0.1		52.9	63.8	18.6
LOS	B	A	A	A	A		D	E	B
Approach Delay		4.4		6.7			52.9	28.3	
Approach LOS		A		A			D	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 66.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	108	801	11	1256	36	24	46	170
v/c Ratio	0.35	0.38	0.02	0.61	0.03	0.24	0.35	0.62
Control Delay	13.2	3.2	1.8	6.1	0.1	52.9	63.8	18.3
Queue Delay	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.3
Total Delay	13.2	3.2	1.8	6.9	0.1	52.9	63.8	18.6
Queue Length 50th (ft)	13	47	1	101	0	15	38	0
Queue Length 95th (ft)	m45	40	m1	86	m0	44	77	70
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	329	2083	516	2048	1093	113	233	354
Starvation Cap Reductn	0	0	0	33	0	0	0	0
Spillback Cap Reductn	0	0	0	460	0	0	0	25
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.38	0.02	0.79	0.03	0.21	0.20	0.52

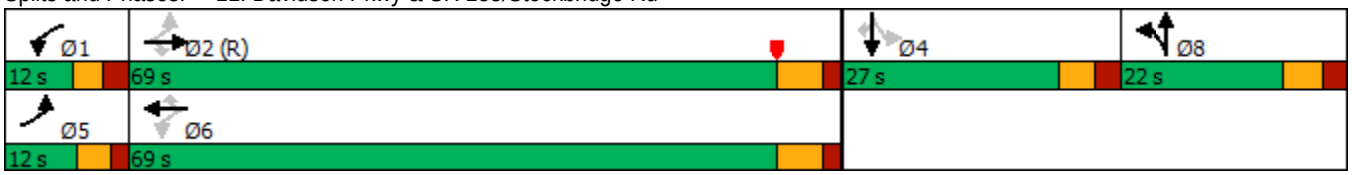
Intersection Summary

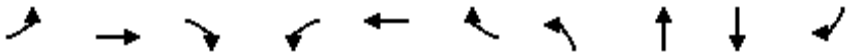
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	833	213	15	1293	53	271	11	20	12	95
Future Volume (vph)	76	833	213	15	1293	53	271	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	22.0	22.0	27.0	27.0	27.0
Total Split (%)	9.2%	53.1%	53.1%	9.2%	53.1%	53.1%	16.9%	16.9%	20.8%	20.8%	20.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	79.3	75.2	75.2	75.0	68.0	68.0	15.3	15.3		16.2	16.2
Actuated g/C Ratio	0.61	0.58	0.58	0.58	0.52	0.52	0.12	0.12		0.12	0.12
v/c Ratio	0.42	0.53	0.22	0.05	0.91	0.06	0.79	0.78		0.74	0.32
Control Delay	19.5	27.2	7.2	4.7	37.2	0.4	83.1	79.7		123.8	6.6
Queue Delay	0.0	0.2	0.0	0.0	10.2	0.0	0.0	0.0		0.0	0.0
Total Delay	19.5	27.4	7.2	4.7	47.4	0.4	83.1	79.7		123.8	6.6
LOS	B	C	A	A	D	A	F	E		F	A
Approach Delay		23.0			45.1			81.4		36.4	
Approach LOS		C			D			F		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	877	224	16	1361	56	157	156	34	100
v/c Ratio	0.42	0.53	0.22	0.05	0.91	0.06	0.79	0.78	0.74	0.32
Control Delay	19.5	27.2	7.2	4.7	37.2	0.4	83.1	79.7	123.8	6.6
Queue Delay	0.0	0.2	0.0	0.0	10.2	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	27.4	7.2	4.7	47.4	0.4	83.1	79.7	123.8	6.6
Queue Length 50th (ft)	35	341	45	4	642	1	134	129	28	0
Queue Length 95th (ft)	m64	421	134	m3	#764	m0	#253	#246	#80	30
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	192	1656	998	360	1499	887	209	211	60	362
Starvation Cap Reductn	0	201	0	0	139	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	88	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.60	0.22	0.04	1.00	0.06	0.75	0.74	0.57	0.28

Intersection Summary

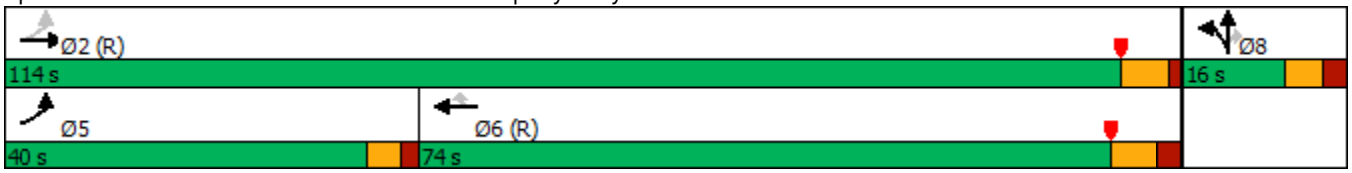
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	552	983	1334	363	0	144
Future Volume (vph)	552	983	1334	363	0	144
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	110.0	109.0	67.0	67.0	8.9	8.9
Actuated g/C Ratio	0.85	0.84	0.52	0.52	0.07	0.07
v/c Ratio	1.06	0.44	0.98	0.41	0.39	0.62
Control Delay	70.1	7.3	32.3	2.5	67.3	19.7
Queue Delay	0.0	0.0	17.8	0.6	0.0	0.0
Total Delay	70.1	7.3	50.1	3.0	67.3	19.7
LOS	E	A	D	A	E	B
Approach Delay		29.9	40.0		30.7	
Approach LOS		C	D		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 35.0	Intersection LOS: C
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	600	1068	1450	395	47	157
v/c Ratio	1.06	0.44	0.98	0.41	0.39	0.62
Control Delay	70.1	7.3	32.3	2.5	67.3	19.7
Queue Delay	0.0	0.0	17.8	0.6	0.0	0.0
Total Delay	70.1	7.3	50.1	3.0	67.3	19.7
Queue Length 50th (ft)	~481	231	296	20	39	0
Queue Length 95th (ft)	m#569	m261	m#781	m27	80	69
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	565	2402	1476	964	134	265
Starvation Cap Reductn	0	0	89	259	0	0
Spillback Cap Reductn	0	5	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.45	1.05	0.56	0.35	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

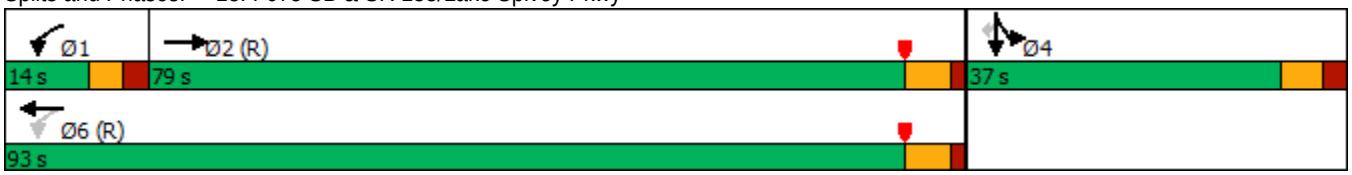
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

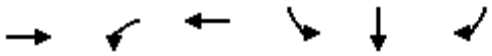
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1356	135	1248	194	0	536
Future Volume (vph)	1356	135	1248	194	0	536
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	73.8	87.6	87.6	30.0	30.0	30.0
Actuated g/C Ratio	0.57	0.67	0.67	0.23	0.23	0.23
v/c Ratio	0.96	0.81	0.71	0.27	0.28	0.92
Control Delay	32.4	50.0	3.8	43.1	43.2	69.2
Queue Delay	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	32.4	50.0	4.6	43.1	43.2	69.2
LOS	C	D	A	D	D	E
Approach Delay	32.4		9.0		62.3	
Approach LOS	C		A		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1571	148	1371	106	107	589
v/c Ratio	0.96	0.81	0.71	0.27	0.28	0.92
Control Delay	32.4	50.0	3.8	43.1	43.2	69.2
Queue Delay	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	32.4	50.0	4.6	43.1	43.2	69.2
Queue Length 50th (ft)	289	57	2	76	77	275
Queue Length 95th (ft)	#828	m62	m2	134	135	#389
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1631	184	1931	394	394	653
Starvation Cap Reductn	0	0	264	0	0	0
Spillback Cap Reductn	0	0	138	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.80	0.82	0.27	0.27	0.90

Intersection Summary

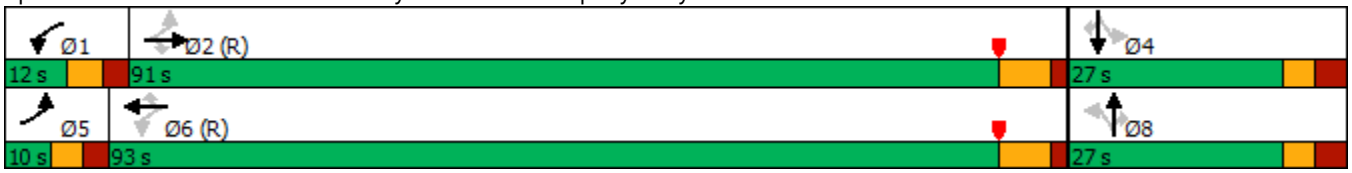
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

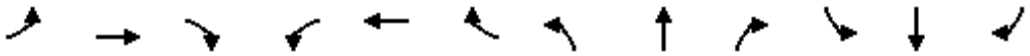
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1243	27	92	1602	47	22	3	79	91	9	63
Future Volume (vph)	32	1243	27	92	1602	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	95.7	89.6	89.6	99.8	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.74	0.69	0.69	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.19	0.62	0.03	0.36	0.75	0.04	0.15	0.01	0.33	0.61	0.05	0.27
Control Delay	3.2	5.3	0.0	5.2	13.4	1.4	51.4	47.7	13.3	69.3	48.6	10.5
Queue Delay	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	5.4	0.0	5.2	13.8	1.4	51.4	47.7	13.3	69.3	48.6	10.5
LOS	A	A	A	A	B	A	D	D	B	E	D	B
Approach Delay		5.3			13.0			22.2			45.5	
Approach LOS		A			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 75.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	1366	30	101	1760	52	24	3	87	100	10	69
v/c Ratio	0.19	0.62	0.03	0.36	0.75	0.04	0.15	0.01	0.33	0.61	0.05	0.27
Control Delay	3.2	5.3	0.0	5.2	13.4	1.4	51.4	47.7	13.3	69.3	48.6	10.5
Queue Delay	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	5.4	0.0	5.2	13.8	1.4	51.4	47.7	13.3	69.3	48.6	10.5
Queue Length 50th (ft)	1	95	0	2	259	0	18	2	0	81	8	0
Queue Length 95th (ft)	m6	146	m0	m30	896	m2	44	12	48	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	182	2202	1114	284	2339	1179	221	295	324	223	295	318
Starvation Cap Reductn	0	0	0	0	176	0	0	0	0	0	0	0
Spillback Cap Reductn	0	121	0	0	0	0	0	0	3	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.66	0.03	0.36	0.81	0.04	0.11	0.01	0.27	0.45	0.03	0.22

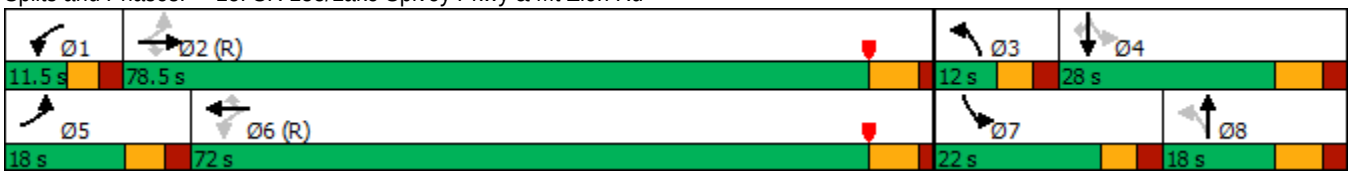
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	167	1048	84	31	1391	241	76	28	240	27	280
Future Volume (vph)	167	1048	84	31	1391	241	76	28	240	27	280
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	86.8	79.7	79.7	75.7	68.8	68.8	15.0	9.5	30.9	17.6	17.6
Actuated g/C Ratio	0.67	0.61	0.61	0.58	0.53	0.53	0.12	0.07	0.24	0.14	0.14
v/c Ratio	0.83	0.58	0.09	0.12	0.89	0.28	0.47	0.40	0.83	0.12	0.83
Control Delay	68.5	12.0	0.4	9.0	24.6	3.8	50.6	39.1	66.4	48.3	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	12.0	0.4	9.0	24.6	3.8	50.6	39.1	66.4	48.3	40.8
LOS	E	B	A	A	C	A	D	D	E	D	D
Approach Delay		18.6			21.3			45.6		52.4	
Approach LOS		B			C			D		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 25.9	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	182	1139	91	34	1512	262	83	63	261	29	304
v/c Ratio	0.83	0.58	0.09	0.12	0.89	0.28	0.47	0.40	0.83	0.12	0.83
Control Delay	68.5	12.0	0.4	9.0	24.6	3.8	50.6	39.1	66.4	48.3	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	12.0	0.4	9.0	24.6	3.8	50.6	39.1	66.4	48.3	40.8
Queue Length 50th (ft)	79	436	0	3	495	5	55	24	194	21	104
Queue Length 95th (ft)	#225	477	m5	m15	#780	m59	100	71	#324	51	#222
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	225	1959	1040	288	1690	947	177	174	315	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.58	0.09	0.12	0.89	0.28	0.47	0.36	0.83	0.10	0.75

Intersection Summary

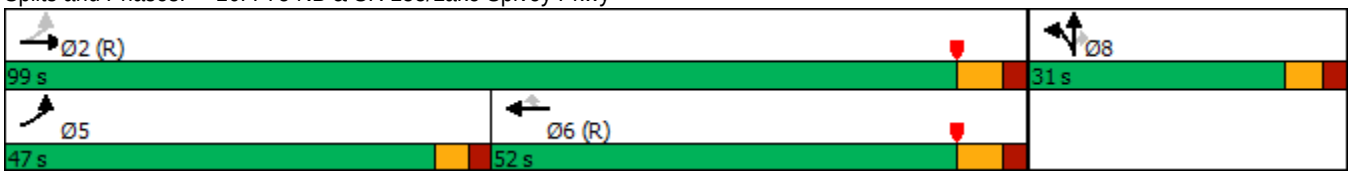
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	680	1195	1047	761	0	216
Future Volume (vph)	680	1195	1047	761	0	216
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	93.5	92.1	45.1	45.1	24.9	24.9
Actuated g/C Ratio	0.72	0.71	0.35	0.35	0.19	0.19
v/c Ratio	1.20	0.58	1.04	0.99	0.99	0.63
Control Delay	128.9	16.2	64.3	35.1	97.7	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.9	16.2	64.3	35.1	97.7	37.0
LOS	F	B	E	D	F	D
Approach Delay		57.1	52.0		72.5	
Approach LOS		E	D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 56.8	Intersection LOS: E
Intersection Capacity Utilization 117.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	747	1313	1151	836	334	237
v/c Ratio	1.20	0.58	1.04	0.99	0.99	0.63
Control Delay	128.9	16.2	64.3	35.1	97.7	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.9	16.2	64.3	35.1	97.7	37.0
Queue Length 50th (ft)	~719	453	~538	140	283	112
Queue Length 95th (ft)	#970	549	m#669	m#323	#479	204
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	623	2263	1108	842	339	378
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.58	1.04	0.99	0.99	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

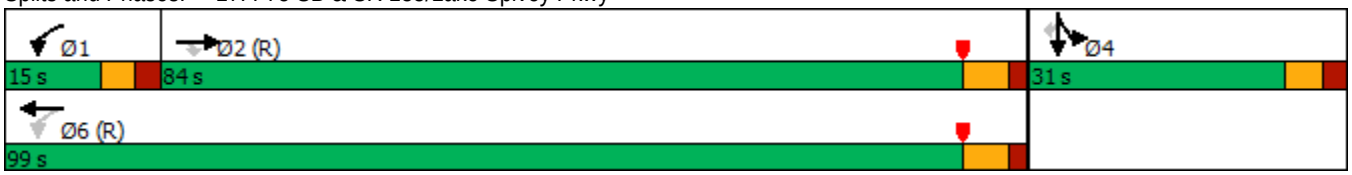
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

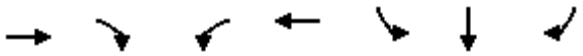
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1499	323	117	1185	391	0	266
Future Volume (vph)	1499	323	117	1185	391	0	266
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	81.6	81.6	96.3	95.8	21.7	21.7	21.7
Actuated g/C Ratio	0.63	0.63	0.74	0.74	0.17	0.17	0.17
v/c Ratio	0.83	0.32	0.64	0.56	0.78	0.78	0.87
Control Delay	13.0	0.7	33.5	0.8	70.0	70.0	59.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	0.7	33.5	0.8	70.0	70.0	59.5
LOS	B	A	C	A	E	E	E
Approach Delay	10.8			3.8		65.8	
Approach LOS	B			A		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 117.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1666	359	130	1317	217	217	296
v/c Ratio	0.83	0.32	0.64	0.56	0.78	0.78	0.87
Control Delay	13.0	0.7	33.5	0.8	70.0	70.0	59.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	0.7	33.5	0.8	70.0	70.0	59.5
Queue Length 50th (ft)	314	0	36	0	182	182	167
Queue Length 95th (ft)	m288	m0	m34	m0	276	276	#303
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	2004	1127	213	2353	320	320	378
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.32	0.61	0.56	0.68	0.68	0.78

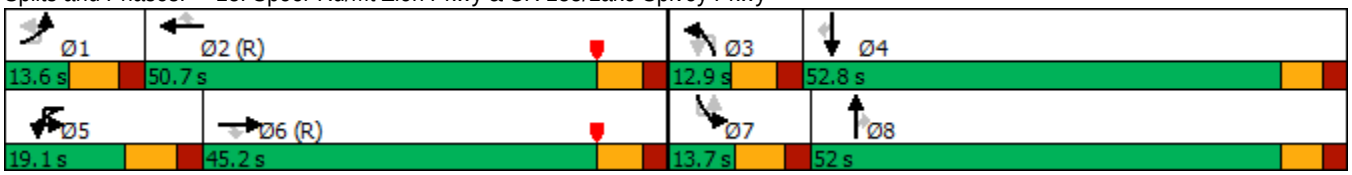
Intersection Summary

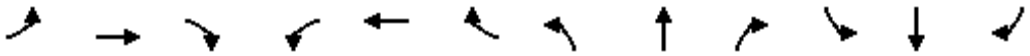
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	881	73	245	953	138	69	191	702	143	82	66
Future Volume (vph)	79	881	73	245	953	138	69	191	702	143	82	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.1	38.1	38.1	11.6	43.6	43.6	6.0	45.4	45.4	6.3	48.8	48.8
Actuated g/C Ratio	0.05	0.29	0.29	0.09	0.34	0.34	0.05	0.35	0.35	0.05	0.38	0.38
v/c Ratio	0.54	1.06	0.14	1.08	0.98	0.24	0.48	0.17	1.18	0.95	0.07	0.11
Control Delay	71.4	86.4	3.6	141.3	48.1	2.1	71.0	29.7	127.4	118.1	27.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	86.4	3.6	141.3	48.1	2.1	71.0	29.7	127.4	118.1	27.5	0.3
LOS	E	F	A	F	D	A	E	C	F	F	C	A
Approach Delay		79.4			63.4			103.9			65.7	
Approach LOS		E			E			F			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 78.7	Intersection LOS: E
Intersection Capacity Utilization 105.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	968	80	325	1047	152	76	210	771	157	90	73
v/c Ratio	0.54	1.06	0.14	1.08	0.98	0.24	0.48	0.17	1.18	0.95	0.07	0.11
Control Delay	71.4	86.4	3.6	141.3	48.1	2.1	71.0	29.7	127.4	118.1	27.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	86.4	3.6	141.3	48.1	2.1	71.0	29.7	127.4	118.1	27.5	0.3
Queue Length 50th (ft)	39	~484	4	~162	366	1	32	64	~690	69	26	0
Queue Length 95th (ft)	m64	#621	m17	m#260	#596	m18	59	94	#937	#140	46	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	161	912	570	300	1071	631	158	1235	653	166	1327	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.06	0.14	1.08	0.98	0.24	0.48	0.17	1.18	0.95	0.07	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

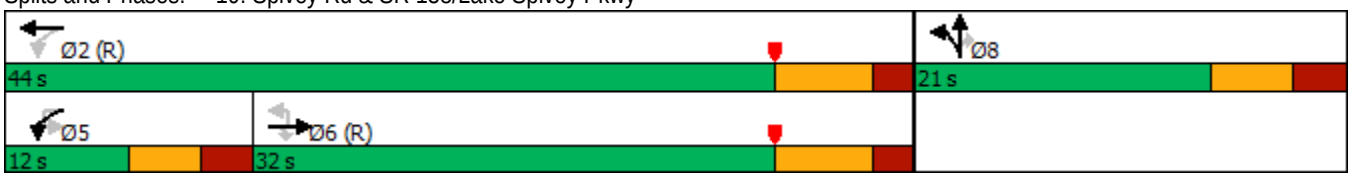
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

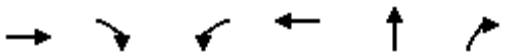
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	713	15	96	944	0	307
Future Volume (vph)	713	15	96	944	0	307
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	32.0	32.0	12.0	44.0	21.0	21.0
Total Split (%)	49.2%	49.2%	18.5%	67.7%	32.3%	32.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	31.0	31.0	42.0	41.2	10.3	10.3
Actuated g/C Ratio	0.48	0.48	0.65	0.63	0.16	0.16
v/c Ratio	0.53	0.02	0.25	0.53	0.13	0.72
Control Delay	15.3	0.1	3.6	10.7	23.2	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	0.1	3.6	10.7	23.2	15.7
LOS	B	A	A	B	C	B
Approach Delay	15.0			10.0	16.5	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 33 (51%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	792	17	107	1049	37	341
v/c Ratio	0.53	0.02	0.25	0.53	0.13	0.72
Control Delay	15.3	0.1	3.6	10.7	23.2	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	0.1	3.6	10.7	23.2	15.7
Queue Length 50th (ft)	114	0	7	137	13	27
Queue Length 95th (ft)	188	0	m19	m468	33	95
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1482	818	426	1970	385	554
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.02	0.25	0.53	0.10	0.62

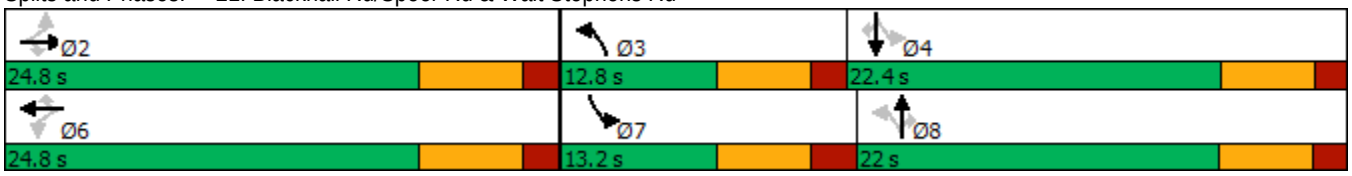
Intersection Summary

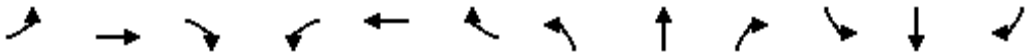
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	244	52	107	290	567	46	355	90	187	74	15
Future Volume (vph)	30	244	52	107	290	567	46	355	90	187	74	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	17.8	17.8	17.8	17.8	17.8	17.8	22.2	15.1	15.1	24.6	21.0	21.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.26	0.26	0.42	0.36	0.36
v/c Ratio	0.13	0.48	0.10	0.39	0.58	0.81	0.09	0.82	0.19	0.57	0.12	0.03
Control Delay	16.6	20.2	0.3	21.0	22.3	16.7	8.9	37.2	2.0	16.5	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	20.2	0.3	21.0	22.3	16.7	8.9	37.2	2.0	16.5	16.3	0.1
LOS	B	C	A	C	C	B	A	D	A	B	B	A
Approach Delay		16.7			18.9			28.1			15.6	
Approach LOS		B			B			C			B	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 58.3		
Natural Cycle: 60		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.82		
Intersection Signal Delay: 20.3	Intersection LOS: C	
Intersection Capacity Utilization 81.6%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	274	58	120	326	637	52	399	101	210	83	17
v/c Ratio	0.13	0.48	0.10	0.39	0.58	0.81	0.09	0.82	0.19	0.57	0.12	0.03
Control Delay	16.6	20.2	0.3	21.0	22.3	16.7	8.9	37.2	2.0	16.5	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	20.2	0.3	21.0	22.3	16.7	8.9	37.2	2.0	16.5	16.3	0.1
Queue Length 50th (ft)	9	79	0	34	98	56	9	133	0	41	23	0
Queue Length 95th (ft)	27	139	0	74	167	#234	24	#257	10	#78	51	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	274	593	610	319	587	797	553	519	560	371	671	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.46	0.10	0.38	0.56	0.80	0.09	0.77	0.18	0.57	0.12	0.03

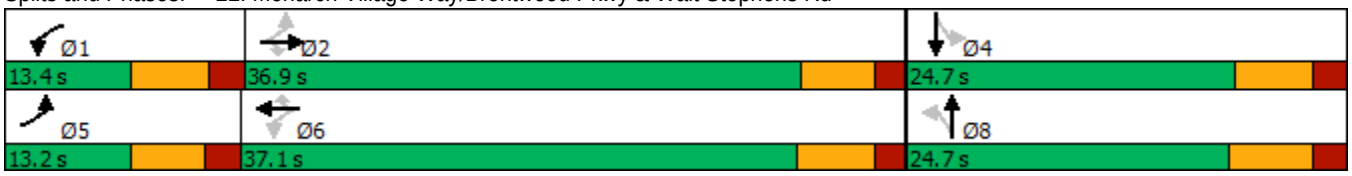
Intersection Summary

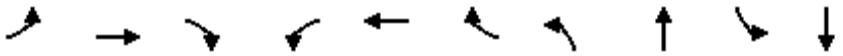
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	26	367	68	93	666	43	187	29	62	36
Future Volume (vph)	26	367	68	93	666	43	187	29	62	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	36.9	36.9	13.4	37.1	37.1	24.7	24.7	24.7	24.7
Total Split (%)	17.6%	49.2%	49.2%	17.9%	49.5%	49.5%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	31.9	26.7	26.7	34.4	32.3	32.3	15.1	15.1	15.4	15.4
Actuated g/C Ratio	0.49	0.41	0.41	0.53	0.50	0.50	0.23	0.23	0.24	0.24
v/c Ratio	0.10	0.55	0.10	0.22	0.83	0.06	0.74	0.36	0.25	0.31
Control Delay	7.7	19.5	0.7	8.4	27.6	0.1	42.4	9.2	24.2	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	19.5	0.7	8.4	27.6	0.1	42.4	9.2	24.2	10.4
LOS	A	B	A	A	C	A	D	A	C	B
Approach Delay		16.1			23.9			27.4		14.8
Approach LOS		B			C			C		B

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 65.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 80.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	417	77	106	757	49	213	176	70	149
v/c Ratio	0.10	0.55	0.10	0.22	0.83	0.06	0.74	0.36	0.25	0.31
Control Delay	7.7	19.5	0.7	8.4	27.6	0.1	42.4	9.2	24.2	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	19.5	0.7	8.4	27.6	0.1	42.4	9.2	24.2	10.4
Queue Length 50th (ft)	5	138	0	19	212	0	75	10	21	12
Queue Length 95th (ft)	15	218	3	39	#553	0	#184	56	58	56
Internal Link Dist (ft)		2243			6582			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	304	905	843	479	923	856	347	564	344	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.46	0.09	0.22	0.82	0.06	0.61	0.31	0.20	0.27

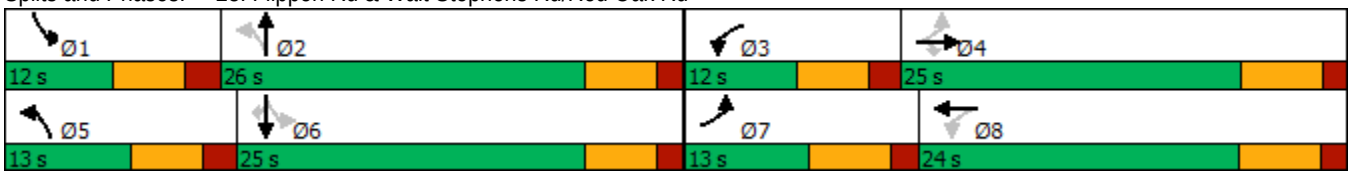
Intersection Summary

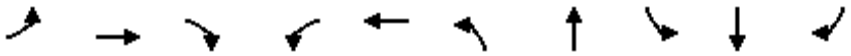
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	202	157	410	20	171	302	345	21	272	172
Future Volume (vph)	202	157	410	20	171	302	345	21	272	172
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	24.2	21.7	21.7	19.3	12.9	27.5	25.4	22.3	16.6	16.6
Actuated g/C Ratio	0.36	0.32	0.32	0.29	0.19	0.41	0.38	0.33	0.25	0.25
v/c Ratio	0.59	0.29	0.56	0.06	0.62	0.89	0.58	0.07	0.67	0.35
Control Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
LOS	C	C	A	B	C	D	C	B	C	A
Approach Delay		13.5			30.8		34.5		20.9	
Approach LOS		B			C		C		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 67.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	224	174	456	22	219	336	401	23	302	191
v/c Ratio	0.59	0.29	0.56	0.06	0.62	0.89	0.58	0.07	0.67	0.35
Control Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
Queue Length 50th (ft)	65	49	0	6	82	93	113	5	113	0
Queue Length 95th (ft)	118	120	68	19	149	#272	#310	19	206	36
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	382	610	825	395	491	377	695	344	529	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.29	0.55	0.06	0.45	0.89	0.58	0.07	0.57	0.32

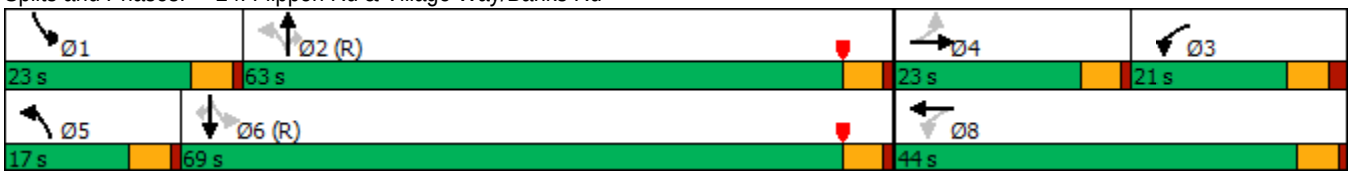
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	19	4	117	2	1	461	145	191	512	7
Future Volume (vph)	19	4	117	2	1	461	145	191	512	7
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	5.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	11.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	23.0	23.0	21.0	44.0	17.0	63.0	63.0	23.0	69.0	69.0
Total Split (%)	17.7%	17.7%	16.2%	33.8%	13.1%	48.5%	48.5%	17.7%	53.1%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	22.2	23.2	89.7	79.7	79.7	96.8	93.8	93.8
Actuated g/C Ratio		0.12	0.17	0.18	0.69	0.61	0.61	0.74	0.72	0.72
v/c Ratio		0.43	0.48	0.39	0.00	0.45	0.16	0.36	0.43	0.01
Control Delay		60.0	53.1	8.9	7.0	16.7	3.2	7.4	10.7	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		60.0	53.1	8.9	7.0	16.7	3.2	7.4	10.7	0.0
LOS		E	D	A	A	B	A	A	B	A
Approach Delay		60.0		28.6		13.4			9.7	
Approach LOS		E		C		B			A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





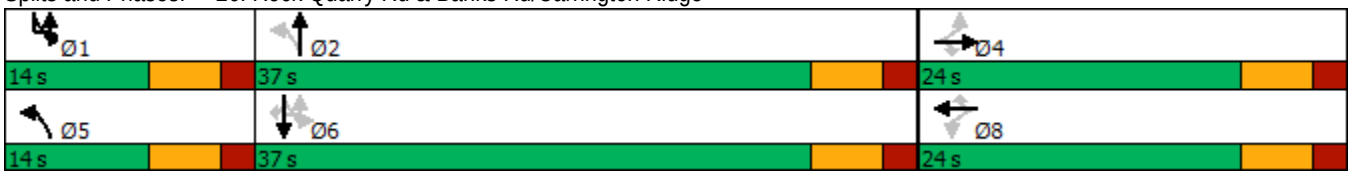
Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	131	163	1	518	163	215	575	8
v/c Ratio	0.43	0.48	0.39	0.00	0.45	0.16	0.36	0.43	0.01
Control Delay	60.0	53.1	8.9	7.0	16.7	3.2	7.4	10.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	53.1	8.9	7.0	16.7	3.2	7.4	10.7	0.0
Queue Length 50th (ft)	20	97	1	0	233	4	52	176	0
Queue Length 95th (ft)	57	149	56	2	381	39	93	400	0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	93	340	593	657	1153	1020	655	1344	1195
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.39	0.27	0.00	0.45	0.16	0.33	0.43	0.01

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBU	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	11	277	57	23	11	151	442	38	3	666	68
Future Volume (vph)	104	11	277	57	23	11	151	442	38	3	666	68
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	1	6	
Permitted Phases	4		4	8		8	2		6	6		6
Detector Phase	4	4	4	8	8	8	5	2	1	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	37.0	14.0	14.0	37.0	37.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	18.7%	49.3%	18.7%	18.7%	49.3%	49.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	Min
Act Effct Green (s)		12.2	12.2		12.2	12.2	31.3	27.1		27.7	23.2	23.2
Actuated g/C Ratio		0.21	0.21		0.21	0.21	0.53	0.46		0.47	0.40	0.40
v/c Ratio		0.48	0.53		0.32	0.03	0.37	0.32		0.09	0.54	0.11
Control Delay		30.1	7.1		26.0	0.1	8.5	11.9		6.4	16.4	1.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		30.1	7.1		26.0	0.1	8.5	11.9		6.4	16.4	1.1
LOS		C	A		C	A	A	B		A	B	A
Approach Delay		13.8			22.9			11.1			14.5	
Approach LOS		B			C			B			B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 58.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	126	304	88	12	166	506	45	732	75
v/c Ratio	0.48	0.53	0.32	0.03	0.37	0.32	0.09	0.54	0.11
Control Delay	30.1	7.1	26.0	0.1	8.5	11.9	6.4	16.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	7.1	26.0	0.1	8.5	11.9	6.4	16.4	1.1
Queue Length 50th (ft)	42	0	29	0	22	62	6	106	0
Queue Length 95th (ft)	99	58	72	0	56	114	19	178	7
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	416	730	437	620	464	1971	574	1950	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.42	0.20	0.02	0.36	0.26	0.08	0.38	0.08

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1089	722	291	603	435	436
Future Volume (veh/h)	1089	722	291	603	435	436
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1184	785	316	655	473	474
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1156	516	279	1810	467	416
Arrive On Green	0.39	0.39	0.15	0.58	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	1184	785	316	655	473	474
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	59.1	59.1	22.3	16.7	48.1	48.1
Cycle Q Clear(g_c), s	59.1	59.1	22.3	16.7	48.1	48.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1156	516	279	1810	467	416
V/C Ratio(X)	1.02	1.52	1.13	0.36	1.01	1.14
Avail Cap(c_a), veh/h	1156	516	279	1810	467	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	45.4	50.5	16.5	50.9	51.0
Incr Delay (d2), s/veh	32.8	244.8	94.1	0.6	44.8	88.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.5	53.1	17.7	5.9	22.5	39.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	78.2	290.3	144.6	17.1	95.8	139.3
LnGrp LOS	F	F	F	B	F	F
Approach Vol, veh/h	1969			971	947	
Approach Delay, s/veh	162.8			58.6	117.6	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.8		55.2	28.4	66.4
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		18.7		50.1	24.3	61.1
Green Ext Time (p_c), s		10.2		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	125.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1668	311	294	1008	336	400
Future Volume (veh/h)	1668	311	294	1008	336	400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1738	324	306	1050	350	417
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1702	911	335	2091	357	318
Arrive On Green	1.00	1.00	0.10	0.71	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	1738	324	306	1050	350	417
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	0.0	0.0	11.8	24.0	29.3	30.1
Cycle Q Clear(g_c), s	0.0	0.0	11.8	24.0	29.3	30.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1702	911	335	2091	357	318
V/C Ratio(X)	1.02	0.36	0.91	0.50	0.98	1.31
Avail Cap(c_a), veh/h	1702	911	362	2091	357	318
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	23.3	9.6	59.6	59.9
Incr Delay (d2), s/veh	21.7	0.6	24.6	0.9	42.0	160.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.1	7.4	7.1	17.3	38.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.7	0.6	47.9	10.5	101.6	220.7
LnGrp LOS	F	A	D	B	F	F
Approach Vol, veh/h	2062			1356	767	
Approach Delay, s/veh	18.4			18.9	166.4	
Approach LOS	B			B	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	20.3	92.7
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		26.0		32.1	13.8	2.0
Green Ext Time (p_c), s		29.3		0.0	0.2	61.4

Intersection Summary		
HCM 6th Ctrl Delay		45.7
HCM 6th LOS		D



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1980	24	10	1320	26	16
Future Volume (veh/h)	1980	24	10	1320	26	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	2020	24	10	1347	27	16
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2667	32	231	2635	49	44
Arrive On Green	1.00	1.00	1.00	1.00	0.03	0.03
Sat Flow, veh/h	3076	36	206	3040	1781	1585
Grp Volume(v), veh/h	996	1048	10	1347	27	16
Grp Sat Flow(s),veh/h/ln	1481	1553	206	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.2	1.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	2.2	1.5
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1318	1381	231	2635	49	44
V/C Ratio(X)	0.76	0.76	0.04	0.51	0.55	0.36
Avail Cap(c_a), veh/h	1318	1381	231	2635	95	85
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.12	0.12	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	72.0	71.6
Incr Delay (d2), s/veh	0.5	0.5	0.3	0.5	9.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.2	1.2	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.5	0.5	0.3	0.5	81.0	76.6
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	2044			1357	43	
Approach Delay, s/veh	0.5			0.5	79.4	
Approach LOS	A			A	E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	139.8	10.2	139.8
Change Period (Y+Rc), s	6.4	6.0	6.4
Max Green Setting (Gmax), s	129.6	8.0	129.6
Max Q Clear Time (g_c+I1), s	2.0	4.2	2.0
Green Ext Time (p_c), s	42.6	0.0	97.2

Intersection Summary	
HCM 6th Ctrl Delay	1.5
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	1570	13	16	1047	302	27	37	72	351	5	156
Future Volume (veh/h)	243	1570	13	16	1047	302	27	37	72	351	5	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	253	1635	14	17	1091	315	28	39	75	366	5	162
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	205	1720	15	66	968	277	126	179	310	348	4	136
Arrive On Green	0.10	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1570	3039	26	303	2273	650	285	524	906	899	12	398
Grp Volume(v), veh/h	253	804	845	17	707	699	142	0	0	533	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1569	303	1481	1442	1715	0	0	1309	0	0
Q Serve(g_s), s	15.0	75.7	76.0	8.4	63.9	63.9	0.0	0.0	0.0	42.4	0.0	0.0
Cycle Q Clear(g_c), s	15.0	75.7	76.0	63.3	63.9	63.9	8.9	0.0	0.0	51.3	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.45	0.20		0.53	0.69		0.30
Lane Grp Cap(c), veh/h	205	846	888	66	631	614	615	0	0	488	0	0
V/C Ratio(X)	1.23	0.95	0.95	0.26	1.12	1.14	0.23	0.00	0.00	1.09	0.00	0.00
Avail Cap(c_a), veh/h	205	846	888	66	631	614	615	0	0	488	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.85	0.85	0.85	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.6	30.6	30.6	59.7	32.5	32.5	35.4	0.0	0.0	52.3	0.0	0.0
Incr Delay (d2), s/veh	109.5	3.2	3.1	7.8	71.4	78.2	0.2	0.0	0.0	68.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	26.8	28.2	0.8	32.8	33.1	3.9	0.0	0.0	28.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.0	33.7	33.7	67.6	103.9	110.7	35.6	0.0	0.0	120.4	0.0	0.0
LnGrp LOS	F	C	C	E	F	F	D	A	A	F	A	A
Approach Vol, veh/h		1902			1423			142			533	
Approach Delay, s/veh		50.4			106.8			35.6			120.4	
Approach LOS		D			F			D			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	21.0	71.0		58.0		92.0		58.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	15.0	63.9		51.3		84.9		51.3				
Max Q Clear Time (g_c+I1), s	17.0	65.9		53.3		78.0		10.9				
Green Ext Time (p_c), s	0.0	0.0		0.0		6.4		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	79.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1822	330	229	1143	18	180	55	205	13	54	29
Future Volume (veh/h)	27	1822	330	229	1143	18	180	55	205	13	54	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1859	337	234	1166	18	184	56	209	13	55	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	331	1553	273	204	2081	32	102	18	239	27	86	38
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2470	434	1795	3014	47	393	120	1585	0	569	251
Grp Volume(v), veh/h	28	1070	1126	234	578	606	240	0	209	98	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1451	1795	1495	1566	513	0	1585	820	0	0
Q Serve(g_s), s	0.8	94.3	94.3	13.0	29.3	29.3	0.0	0.0	19.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	94.3	94.3	13.0	29.3	29.3	22.6	0.0	19.4	22.6	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.03	0.77		1.00	0.13		0.31
Lane Grp Cap(c), veh/h	331	913	912	204	1032	1081	120	0	239	151	0	0
V/C Ratio(X)	0.08	1.17	1.23	1.15	0.56	0.56	2.01	0.00	0.88	0.65	0.00	0.00
Avail Cap(c_a), veh/h	358	913	912	204	1032	1081	120	0	239	151	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	27.9	27.9	57.4	11.7	11.7	67.7	0.0	62.3	57.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	88.7	115.0	72.8	0.2	0.2	480.8	0.0	29.9	12.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	51.8	58.4	11.6	9.3	9.7	20.6	0.0	9.7	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	116.6	142.8	130.2	11.9	11.9	548.5	0.0	92.2	70.5	0.0	0.0
LnGrp LOS	B	F	F	F	B	B	F	A	F	E	A	A
Approach Vol, veh/h		2224			1418			449			98	
Approach Delay, s/veh		128.5			31.4			336.1			70.5	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	110.3		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.8	31.3		24.6	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	25.7		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	116.6	
HCM 6th LOS	F	

Intersection	
Int Delay, s/veh	1.2

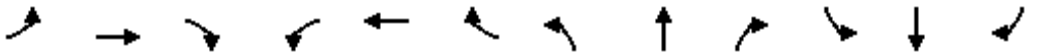
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	4	128	25	5	35	119	1169	37	38	1987	95
Future Vol, veh/h	30	4	128	25	5	35	119	1169	37	38	1987	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	31	4	133	26	5	36	124	1218	39	40	2070	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3060	3705	1085	2583	3715	609	2169	0	0	1257	0	0
Stage 1	2200	2200	-	1466	1466	-	-	-	-	-	-	-
Stage 2	860	1505	-	1117	2249	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 5	~ 4	212	~ 13	~ 4	438	243	-	-	549	-	-
Stage 1	46	81	-	134	191	-	-	-	-	-	-	-
Stage 2	317	182	-	221	77	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 2	212	-	~ 2	438	243	-	-	549	-	-
Mov Cap-2 Maneuver	-	~ 2	-	-	~ 2	-	-	-	-	-	-	-
Stage 1	~ 23	75	-	66	94	-	-	-	-	-	-	-
Stage 2	134	89	-	72	71	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			3.1	0.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	243	-	-	-	-	549	-	-
HCM Lane V/C Ratio	0.51	-	-	-	-	0.072	-	-
HCM Control Delay (s)	34.3	-	-	-	-	12.1	-	-
HCM Lane LOS	D	-	-	-	-	B	-	-
HCM 95th %tile Q(veh)	2.7	-	-	-	-	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	173	1313	125	172	126	757	439	71	70	706	151
Future Volume (veh/h)	282	173	1313	125	172	126	757	439	71	70	706	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	294	180	1368	130	179	131	789	457	74	73	735	157
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.21	0.41	0.41	0.05	0.24	0.24
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	294	180	1368	130	179	131	789	457	74	73	735	157
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	28.3	16.1	54.0	12.8	17.0	14.7	38.4	20.0	5.2	7.3	43.9	18.4
Cycle Q Clear(g_c), s	28.3	16.1	54.0	12.8	17.0	14.7	38.4	20.0	5.2	7.3	43.9	18.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
V/C Ratio(X)	0.55	0.32	1.08	0.77	1.01	0.88	1.21	0.39	0.12	0.80	1.02	0.49
Avail Cap(c_a), veh/h	534	561	1262	168	177	150	650	1179	643	145	722	322
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	64.0	50.9	79.6	81.5	80.5	70.8	37.7	33.4	84.5	68.1	58.4
Incr Delay (d2), s/veh	0.5	0.2	43.9	20.2	71.2	40.1	110.3	1.0	0.4	34.6	37.9	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	8.2	30.7	6.9	11.8	7.6	24.7	7.2	2.1	4.2	20.2	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.0	64.2	94.7	99.8	152.7	120.5	181.1	38.7	33.7	119.1	105.9	63.6
LnGrp LOS	E	E	F	F	F	F	F	D	C	F	F	E
Approach Vol, veh/h		1842			440			1320			965	
Approach Delay, s/veh		87.8			127.5			123.5			100.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	79.9		24.0	45.2	50.8		60.0				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	14.7	67.5		17.0	38.4	43.9		54.0				
Max Q Clear Time (g_c+I1), s	9.3	22.0		19.0	40.4	45.9		56.0				
Green Ext Time (p_c), s	0.1	7.0		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		104.5	
HCM 6th LOS		F	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	119	655	106	282	965
Future Volume (veh/h)	123	119	655	106	282	965
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	126	0	668	108	288	985
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	290		1025	548	524	1794
Arrive On Green	0.16	0.00	0.35	0.35	0.15	0.61
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	126	0	668	108	288	985
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	3.3	0.0	9.7	2.4	4.5	10.0
Cycle Q Clear(g_c), s	3.3	0.0	9.7	2.4	4.5	10.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	290		1025	548	524	1794
V/C Ratio(X)	0.43		0.65	0.20	0.55	0.55
Avail Cap(c_a), veh/h	363		1381	739	549	2194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	14.1	11.7	8.8	5.9
Incr Delay (d2), s/veh	1.0	0.0	1.5	0.4	1.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.7	0.7	1.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	0.0	15.6	12.1	9.8	6.5
LnGrp LOS	C		B	B	A	A
Approach Vol, veh/h	126	A	776			1273
Approach Delay, s/veh	20.3		15.1			7.3
Approach LOS	C		B			A

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	37.1			13.3	23.9	13.9
Change Period (Y+Rc), s	6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s	37.8			8.6	23.8	10.4
Max Q Clear Time (g_c+I1), s	12.0			6.5	11.7	5.3
Green Ext Time (p_c), s	12.9			0.2	5.9	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1937	67	50	1192	25	84	5	87	10	7	24
Future Volume (veh/h)	23	1937	67	50	1192	25	84	5	87	10	7	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	2039	71	53	1255	26	88	5	92	11	7	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	400	2280	79	238	2335	1182	39	0	193	32	13	193
Arrive On Green	0.05	1.00	1.00	0.04	0.99	0.99	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3088	107	1781	3131	1585	0	0	1585	0	109	1585
Grp Volume(v), veh/h	24	1028	1082	53	1255	26	93	0	92	18	0	25
Grp Sat Flow(s),veh/h/ln	1781	1566	1629	1781	1566	1585	0	0	1585	109	0	1585
Q Serve(g_s), s	0.6	0.0	0.0	1.3	1.3	0.0	0.0	0.0	9.7	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	1.3	1.3	0.0	21.9	0.0	9.7	21.9	0.0	2.5
Prop In Lane	1.00		0.07	1.00		1.00	0.95		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	400	1156	1203	238	2335	1182	39	0	193	45	0	193
V/C Ratio(X)	0.06	0.89	0.90	0.22	0.54	0.02	2.39	0.00	0.48	0.40	0.00	0.13
Avail Cap(c_a), veh/h	420	1156	1203	245	2335	1182	39	0	193	45	0	193
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.29	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.1	0.0	0.0	4.9	0.2	0.2	90.0	0.0	73.7	74.4	0.0	70.5
Incr Delay (d2), s/veh	0.0	3.4	3.6	0.0	0.1	0.0	696.5	0.0	1.8	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.1	1.2	0.4	0.2	0.0	9.4	0.0	4.1	0.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	3.4	3.6	4.9	0.3	0.2	786.5	0.0	75.5	79.9	0.0	70.8
LnGrp LOS	A	A	A	A	A	A	F	A	E	E	A	E
Approach Vol, veh/h		2134			1334			185			43	
Approach Delay, s/veh		3.5			0.5			433.0			74.6	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	139.7		29.0	10.0	141.0		29.0
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1
Max Green Setting (Gmax), s	* 6.3	* 1.3E2		21.9	* 6.2	* 1.3E2		21.9
Max Q Clear Time (g_c+I1), s	3.3	2.0		23.9	2.6	3.3		23.9
Green Ext Time (p_c), s	0.0	98.9		0.0	0.0	32.4		0.0

Intersection Summary		
HCM 6th Ctrl Delay	24.7	
HCM 6th LOS	C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	1905	28	9	1226	93	11	4	10	139	5	151
Future Volume (veh/h)	119	1905	28	9	1226	93	11	4	10	139	5	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	1944	29	9	1251	95	11	4	10	142	5	154
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	382	2075	31	215	2180	1104	24	9	22	185	7	171
Arrive On Green	0.07	1.00	1.00	0.02	1.00	1.00	0.03	0.03	0.03	0.11	0.11	0.11
Sat Flow, veh/h	1781	2903	43	1781	3131	1585	752	274	684	1723	61	1585
Grp Volume(v), veh/h	121	961	1012	9	1251	95	25	0	0	147	0	154
Grp Sat Flow(s),veh/h/ln	1781	1439	1507	1781	1566	1585	1710	0	0	1784	0	1585
Q Serve(g_s), s	3.7	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	14.4	0.0	17.3
Cycle Q Clear(g_c), s	3.7	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	14.4	0.0	17.3
Prop In Lane	1.00		0.03	1.00		1.00	0.44		0.40	0.97		1.00
Lane Grp Cap(c), veh/h	382	1028	1077	215	2180	1104	54	0	0	192	0	171
V/C Ratio(X)	0.32	0.93	0.94	0.04	0.57	0.09	0.46	0.00	0.00	0.77	0.00	0.90
Avail Cap(c_a), veh/h	392	1028	1077	258	2180	1104	77	0	0	198	0	176
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.85	0.85	0.85	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	7.6	0.0	0.0	85.6	0.0	0.0	78.1	0.0	79.4
Incr Delay (d2), s/veh	0.0	2.1	2.2	0.1	0.9	0.1	6.0	0.0	0.0	15.9	0.0	40.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.6	0.6	0.1	0.3	0.0	1.3	0.0	0.0	7.6	0.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.8	2.1	2.2	7.7	0.9	0.1	91.6	0.0	0.0	94.0	0.0	120.2
LnGrp LOS	A	A	A	A	A	A	F	A	A	F	A	F
Approach Vol, veh/h		2094			1355			25			301	
Approach Delay, s/veh		2.4			0.9			91.6			107.4	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	135.0		25.4	11.0	131.6		12.0
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 1.2E2		20.0	7.0	* 1.2E2		8.1
Max Q Clear Time (g_c+I1), s	2.3	2.0		19.3	5.7	2.0		4.6
Green Ext Time (p_c), s	0.0	83.2		0.1	0.0	33.8		0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1924	408	45	1248	61	272	28	52	70	27	188
Future Volume (veh/h)	165	1924	408	45	1248	61	272	28	52	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2004	0	47	1300	64	183	169	54	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	359	1821		94	1804	993	116	88	28	180	69	219
Arrive On Green	0.05	0.84	0.00	0.06	1.00	1.00	0.06	0.06	0.06	0.14	0.14	0.14
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	1781	1358	434	1305	500	1585
Grp Volume(v), veh/h	172	2004	0	47	1300	64	183	0	223	101	0	196
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	0	1792	1805	0	1585
Q Serve(g_s), s	6.6	113.9	0.0	1.7	0.0	0.0	11.7	0.0	11.7	9.2	0.0	21.9
Cycle Q Clear(g_c), s	6.6	113.9	0.0	1.7	0.0	0.0	11.7	0.0	11.7	9.2	0.0	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	0.72		1.00
Lane Grp Cap(c), veh/h	359	1821		94	1804	993	116	0	116	250	0	219
V/C Ratio(X)	0.48	1.10		0.50	0.72	0.06	1.58	0.00	1.91	0.40	0.00	0.89
Avail Cap(c_a), veh/h	359	1821		104	1804	993	116	0	116	752	0	660
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	14.3	0.0	44.8	0.0	0.0	84.2	0.0	84.2	70.8	0.0	76.3
Incr Delay (d2), s/veh	0.1	46.2	0.0	3.3	1.4	0.0	298.3	0.0	441.5	1.1	0.0	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	30.1	0.0	1.4	0.4	0.0	15.1	0.0	19.8	4.4	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	60.5	0.0	48.1	1.4	0.0	382.5	0.0	525.7	71.8	0.0	88.2
LnGrp LOS	B	F		D	A	A	F	A	F	E	A	F
Approach Vol, veh/h		2176	A		1411			406			297	
Approach Delay, s/veh		56.6			2.9			461.1			82.7	
Approach LOS		E			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	120.2		30.9	12.0	119.1		18.0
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3
Max Green Setting (Gmax), s	6.5	* 63		75.0	7.0	* 63		11.7
Max Q Clear Time (g_c+I1), s	13.7	115.9		23.9	8.6	2.0		13.7
Green Ext Time (p_c), s	0.0	0.0		1.0	0.0	29.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	2326	0	0	1458	301	59	0	188	0	0	0
Future Volume (veh/h)	436	2326	0	0	1458	301	59	0	188	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	454	2423	0	0	1519	314	61	0	196			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	423	2318	0	0	1663	916	217	0	193			
Arrive On Green	0.40	1.00	0.00	0.00	0.58	0.58	0.12	0.00	0.12			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	454	2423	0	0	1519	314	61	0	196			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	36.0	0.0	0.0	0.0	85.0	18.8	5.6	0.0	21.9			
Cycle Q Clear(g_c), s	36.0	0.0	0.0	0.0	85.0	18.8	5.6	0.0	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	423	2318	0	0	1663	916	217	0	193			
V/C Ratio(X)	1.07	1.05	0.00	0.00	0.91	0.34	0.28	0.00	1.02			
Avail Cap(c_a), veh/h	423	2334	0	0	1663	916	217	0	193			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.6	0.0	0.0	0.0	34.0	20.0	71.9	0.0	79.1			
Incr Delay (d2), s/veh	37.8	21.8	0.0	0.0	1.0	0.1	0.7	0.0	69.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	18.0	7.0	0.0	0.0	28.5	6.9	2.6	0.0	12.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.3	21.8	0.0	0.0	35.0	20.1	72.6	0.0	148.2			
LnGrp LOS	F	F	A	A	C	C	E	A	F			
Approach Vol, veh/h		2877			1833			257				
Approach Delay, s/veh		31.4			32.4			130.2				
Approach LOS		C			C			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		152.0			41.0	111.0		28.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			38.0	87.0		23.9				
Green Ext Time (p_c), s		123.1			0.0	14.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2222	71	117	1398	0	0	0	0	564	0	706
Future Volume (veh/h)	0	2222	71	117	1398	0	0	0	0	564	0	706
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2291	73	121	1441	0				581	0	728
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1852	59	100	2064	0				762	0	678
Arrive On Green	0.00	0.87	0.87	0.05	0.95	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2923	90	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1152	1212	121	1441	0				581	0	728
Grp Sat Flow(s),veh/h/ln	0	1439	1498	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	117.1	117.1	6.1	12.4	0.0				27.6	0.0	38.5
Cycle Q Clear(g_c), s	0.0	117.1	117.1	6.1	12.4	0.0				27.6	0.0	38.5
Prop In Lane	0.00		0.06	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	936	975	100	2064	0				762	0	678
V/C Ratio(X)	0.00	1.23	1.24	1.21	0.70	0.00				0.76	0.00	1.07
Avail Cap(c_a), veh/h	0	936	975	100	2064	0				762	0	678
HCM Platoon Ratio	1.00	1.33	1.33	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.33	0.33	0.28	0.28	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.1	12.1	62.9	1.5	0.0				66.5	0.0	70.8
Incr Delay (d2), s/veh	0.0	106.9	112.7	116.0	0.6	0.0				4.7	0.0	56.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	41.7	45.0	6.2	1.5	0.0				12.9	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	119.0	124.8	178.9	2.0	0.0				71.2	0.0	126.8
LnGrp LOS	A	F	F	F	A	A				E	A	F
Approach Vol, veh/h		2364			1562						1309	
Approach Delay, s/veh		122.0			15.7						102.1	
Approach LOS		F			B						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	8.1	119.1		40.5		14.4
Green Ext Time (p_c), s	0.0	0.0		0.0		42.5

Intersection Summary	
HCM 6th Ctrl Delay	85.3
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1938	47	197	1736	95	65	23	197	85	17	46
Future Volume (veh/h)	45	1938	47	197	1736	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2019	49	205	1808	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	245	2329	1138	263	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.06	0.99	0.99	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2019	49	205	1808	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.3	0.0	0.0	5.7	4.2	0.1	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.3	0.0	0.0	5.7	4.2	0.1	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	2329	1138	263	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.19	0.87	0.04	0.78	0.75	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	263	2329	1138	412	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.24	0.24	0.24	0.36	0.36	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.2	0.0	0.0	6.1	0.3	0.2	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.7	0.8	0.1	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.0	1.9	0.6	0.1	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	1.2	0.0	6.8	1.1	0.3	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	A	A	A	A	A	E	E	F	E	E	E
Approach Vol, veh/h		2115			2112			297			155	
Approach Delay, s/veh		1.3			1.6			116.6			75.1	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.9	136.1		30.0	9.2	140.8		30.0
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24
Max Q Clear Time (g_c+I1), s	7.7	2.0		17.3	3.3	6.2		25.2
Green Ext Time (p_c), s	0.2	80.7		0.4	0.0	73.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1533	168	47	1365	369	148	87	40	382	79	211
Future Volume (veh/h)	212	1533	168	47	1365	369	148	87	40	382	79	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	1631	179	50	1452	393	157	93	43	406	84	224
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	302	1794	876	225	1631	797	283	107	50	393	363	308
Arrive On Green	0.15	1.00	1.00	0.06	1.00	1.00	0.08	0.09	0.09	0.19	0.19	0.19
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	1781	1870	1585
Grp Volume(v), veh/h	226	1631	179	50	1452	393	157	0	136	406	84	224
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	11.5	0.0	0.0	2.4	0.0	0.0	14.4	0.0	13.7	34.0	6.8	23.9
Cycle Q Clear(g_c), s	11.5	0.0	0.0	2.4	0.0	0.0	14.4	0.0	13.7	34.0	6.8	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	302	1794	876	225	1631	797	283	0	157	393	363	308
V/C Ratio(X)	0.75	0.91	0.20	0.22	0.89	0.49	0.55	0.00	0.87	1.03	0.23	0.73
Avail Cap(c_a), veh/h	341	1794	876	231	1631	797	283	0	186	393	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.44	0.64	0.64	0.64	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	0.0	19.5	0.0	0.0	67.7	0.0	81.0	60.0	61.2	68.0
Incr Delay (d2), s/veh	3.6	4.0	0.2	0.3	5.2	1.4	2.3	0.0	33.9	54.6	0.7	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	1.0	0.1	1.0	1.2	0.3	6.8	0.0	7.8	22.2	3.3	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	4.0	0.2	19.8	5.2	1.4	70.0	0.0	114.9	114.5	61.9	77.4
LnGrp LOS	B	A	A	B	A	A	E	A	F	F	E	E
Approach Vol, veh/h		2036			1895			293			714	
Approach Delay, s/veh		5.4			4.8			90.8			96.7	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	105.9	21.0	42.1	20.0	96.9	40.0	23.1
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	14.4	2.0	16.4	25.9	13.5	2.0	36.0	15.7
Green Ext Time (p_c), s	0.0	54.7	0.0	1.8	0.2	48.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	1921	0	0	1327	508	233	0	169	0	0	0
Future Volume (veh/h)	284	1921	0	0	1327	508	233	0	169	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	309	2088	0	0	1442	0	253	0	184			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	413	2506	0	0	2180		277	0	246			
Arrive On Green	0.09	1.00	0.00	0.00	1.00	0.00	0.16	0.00	0.16			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	309	2088	0	0	1442	0	253	0	184			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	9.8	0.0	0.0	0.0	0.0	0.0	25.2	0.0	20.0			
Cycle Q Clear(g_c), s	9.8	0.0	0.0	0.0	0.0	0.0	25.2	0.0	20.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	413	2506	0	0	2180		277	0	246			
V/C Ratio(X)	0.75	0.83	0.00	0.00	0.66		0.91	0.00	0.75			
Avail Cap(c_a), veh/h	571	2506	0	0	2180		365	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.19	0.19	0.00	0.00	0.35	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.6	0.0	0.0	0.0	0.0	0.0	74.8	0.0	72.6			
Incr Delay (d2), s/veh	0.7	0.7	0.0	0.0	0.6	0.0	19.9	0.0	4.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	0.2	0.0	0.0	0.2	0.0	12.8	0.0	8.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	0.7	0.0	0.0	0.6	0.0	94.7	0.0	76.9			
LnGrp LOS	A	A	A	A	A		F	A	E			
Approach Vol, veh/h		2397			1442	A		437				
Approach Delay, s/veh		1.5			0.6			87.2				
Approach LOS		A			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		145.9			18.1	127.9		34.1				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			11.8	2.0		27.2				
Green Ext Time (p_c), s		91.8			0.8	39.3		0.8				

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1321	291	171	1476	0	0	0	0	885	0	751
Future Volume (veh/h)	0	1321	291	171	1476	0	0	0	0	885	0	751
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1405	310	182	1570	0				941	0	799
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1346	658	141	1635	0				1520	0	676
Arrive On Green	0.00	0.83	0.83	0.04	0.34	0.00				0.43	0.00	0.43
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1405	310	182	1570	0				941	0	799
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	74.7	9.8	10.2	85.4	0.0				37.0	0.0	76.8
Cycle Q Clear(g_c), s	0.0	74.7	9.8	10.2	85.4	0.0				37.0	0.0	76.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1346	658	141	1635	0				1520	0	676
V/C Ratio(X)	0.00	1.04	0.47	1.29	0.96	0.00				0.62	0.00	1.18
Avail Cap(c_a), veh/h	0	1346	658	141	1635	0				1520	0	676
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.55	0.55	0.55	0.55	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.3	9.8	58.7	57.9	0.0				40.2	0.0	51.6
Incr Delay (d2), s/veh	0.0	30.8	1.3	157.1	9.6	0.0				0.8	0.0	96.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.5	2.7	12.8	37.9	0.0				15.9	0.0	47.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	46.1	11.1	215.8	67.4	0.0				41.0	0.0	147.9
LnGrp LOS	A	F	B	F	E	A				D	A	F
Approach Vol, veh/h		1715			1752						1740	
Approach Delay, s/veh		39.8			82.8						90.1	
Approach LOS		D			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	81.0		83.0		97.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	12.2	76.7		78.8		87.4
Green Ext Time (p_c), s	0.0	0.0		0.0		3.0

Intersection Summary	
HCM 6th Ctrl Delay	71.1
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	141	801	117	57	720	981	275	73	172	284	393
Future Volume (veh/h)	9	141	801	117	57	720	981	275	73	172	284	393
Initial Q (Qb), veh		0	0	0		0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00		1.00		1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No				No			No		
Adj Sat Flow, veh/h/ln		1870	1663	1870		1870	1707	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		148	843	123		758	1033	289	77	181	299	414
Peak Hour Factor		0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		2	16	2		2	13	2	2	2	2	2
Cap, veh/h		185	1098	551		803	1707	834	113	462	206	454
Arrive On Green		0.11	0.69	0.69		0.39	0.88	0.88	0.03	0.13	0.13	0.13
Sat Flow, veh/h		3456	3159	1585		3456	3244	1585	3456	3554	1585	3456
Grp Volume(v), veh/h		148	843	123		758	1033	289	77	181	299	414
Grp Sat Flow(s),veh/h/ln		1728	1580	1585		1728	1622	1585	1728	1777	1585	1728
Q Serve(g_s), s		7.5	31.4	5.0		38.1	14.8	5.7	4.0	8.4	23.4	21.3
Cycle Q Clear(g_c), s		7.5	31.4	5.0		38.1	14.8	5.7	4.0	8.4	23.4	21.3
Prop In Lane		1.00		1.00		1.00		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		185	1098	551		803	1707	834	113	462	206	454
V/C Ratio(X)		0.80	0.77	0.22		0.94	0.61	0.35	0.68	0.39	1.45	0.91
Avail Cap(c_a), veh/h		227	1098	551		893	1707	834	136	462	206	491
HCM Platoon Ratio		2.00	2.00	2.00		1.67	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.84	0.84	0.84		0.09	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		79.5	22.7	18.7		54.0	6.1	5.5	86.1	71.8	78.3	77.1
Incr Delay (d2), s/veh		13.2	4.4	0.8		2.4	0.1	0.1	10.2	0.5	228.0	20.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.5	8.0	1.9		15.0	2.9	1.6	1.9	3.8	22.5	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		92.7	27.1	19.5		56.4	6.2	5.6	96.3	72.3	306.3	97.5
LnGrp LOS		F	C	B		E	A	A	F	E	F	F
Approach Vol, veh/h			1114				2080			557		
Approach Delay, s/veh			35.0				24.4			201.2		
Approach LOS			C				C			F		

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	101.8	12.8	48.3	49.3	69.6	31.1	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	9.5	16.8	6.0	18.5	40.1	33.4	23.3	25.4
Green Ext Time (p_c), s	0.1	26.0	0.0	2.9	1.7	10.9	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	356	161
Future Volume (veh/h)	356	161
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1870	1870
Adj Flow Rate, veh/h	375	169
Peak Hour Factor	0.95	0.95
Percent Heavy Veh, %	2	2
Cap, veh/h	823	367
Arrive On Green	0.23	0.23
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	375	169
Grp Sat Flow(s),veh/h/ln	1777	1585
Q Serve(g_s), s	16.3	16.5
Cycle Q Clear(g_c), s	16.3	16.5
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	823	367
V/C Ratio(X)	0.46	0.46
Avail Cap(c_a), veh/h	837	373
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	59.4	59.5
Incr Delay (d2), s/veh	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	6.7
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	59.8	60.4
LnGrp LOS	E	E
Approach Vol, veh/h	958	
Approach Delay, s/veh	76.2	
Approach LOS	E	
Timer - Assigned Phs		

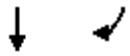
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	0	0	809	54	43	334	829	0	18	0	189	0
Future Volume (veh/h)	0	0	809	54	43	334	829	0	18	0	189	0
Initial Q (Qb), veh		0	0	0		0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)		1.00		1.00		1.00		1.00	1.00		1.00	
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach			No				No			No		
Adj Sat Flow, veh/h/ln		0	1663	1870		1870	1663	0	1900	1900	1900	
Adj Flow Rate, veh/h		0	852	57		352	873	0	19	0	199	
Peak Hour Factor		0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %		0	16	2		2	16	0	0	0	0	
Cap, veh/h		0	1628	817		508	2232	0	260	0	231	
Arrive On Green		0.00	0.52	0.52		0.25	1.00	0.00	0.14	0.00	0.14	
Sat Flow, veh/h		0	3243	1585		1781	3243	0	1810	0	1610	
Grp Volume(v), veh/h		0	852	57		352	873	0	19	0	199	
Grp Sat Flow(s),veh/h/ln		0	1580	1585		1781	1580	0	1810	0	1610	
Q Serve(g_s), s		0.0	16.1	1.6		8.5	0.0	0.0	0.8	0.0	10.9	
Cycle Q Clear(g_c), s		0.0	16.1	1.6		8.5	0.0	0.0	0.8	0.0	10.9	
Prop In Lane		0.00		1.00		1.00		0.00	1.00		1.00	
Lane Grp Cap(c), veh/h		0	1628	817		508	2232	0	260	0	231	
V/C Ratio(X)		0.00	0.52	0.07		0.69	0.39	0.00	0.07	0.00	0.86	
Avail Cap(c_a), veh/h		0	1628	817		662	2232	0	288	0	256	
HCM Platoon Ratio		1.00	1.00	1.00		2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)		0.00	1.00	1.00		0.80	0.80	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh		0.0	14.5	11.0		8.7	0.0	0.0	33.4	0.0	37.7	
Incr Delay (d2), s/veh		0.0	1.2	0.2		1.7	0.4	0.0	0.1	0.0	23.0	
Initial Q Delay(d3),s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln		0.0	5.3	0.5		2.0	0.1	0.0	0.4	0.0	5.6	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	15.7	11.1		10.4	0.4	0.0	33.5	0.0	60.7	
LnGrp LOS		A	B	B		B	A	A	C	A	E	
Approach Vol, veh/h			909				1225			218		
Approach Delay, s/veh			15.4				3.3			58.3		
Approach LOS			B				A			E		

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	70.4			17.2	53.2		19.6					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	62.2			19.0	37.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			10.5	18.1		12.9					
Green Ext Time (p_c), s	20.0			0.7	11.3		0.1					

Intersection Summary												
HCM 6th Ctrl Delay			13.1									
HCM 6th LOS			B									

Notes

User approved ignoring U-Turning movement.



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	0
Future Volume (veh/h)	0	0
Initial Q (Qb), veh		
Ped-Bike Adj(A_pbT)		
Parking Bus, Adj		
Work Zone On Approach		
Adj Sat Flow, veh/h/ln		
Adj Flow Rate, veh/h		
Peak Hour Factor		
Percent Heavy Veh, %		
Cap, veh/h		
Arrive On Green		
Sat Flow, veh/h		
Grp Volume(v), veh/h		
Grp Sat Flow(s),veh/h/ln		
Q Serve(g_s), s		
Cycle Q Clear(g_c), s		
Prop In Lane		
Lane Grp Cap(c), veh/h		
V/C Ratio(X)		
Avail Cap(c_a), veh/h		
HCM Platoon Ratio		
Upstream Filter(I)		
Uniform Delay (d), s/veh		
Incr Delay (d2), s/veh		
Initial Q Delay(d3),s/veh		
%ile BackOfQ(50%),veh/ln		
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh		
LnGrp LOS		
Approach Vol, veh/h		
Approach Delay, s/veh		
Approach LOS		
Timer - Assigned Phs		

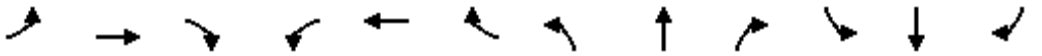
Intersection	
Int Delay, s/veh	11.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	115	436	300	60	90	190
Future Vol, veh/h	115	436	300	60	90	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	128	484	333	67	100	211

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	400	0	-	0	1107	367
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	740	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1170	-	-	-	233	678
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	198	678
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	45.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1170	-	-	-	381
HCM Lane V/C Ratio	0.109	-	-	-	0.817
HCM Control Delay (s)	8.5	0	-	-	45.1
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	0.4	-	-	-	7.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	425	78	112	305	280	43	173	95	652	422	18
Future Volume (veh/h)	29	425	78	112	305	280	43	173	95	652	422	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	429	79	113	308	283	43	175	96	659	426	18
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	221	500	423	164	500	423	384	312	264	678	705	598
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.38	0.38
Sat Flow, veh/h	832	1885	1598	899	1885	1598	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	29	429	79	113	308	283	43	175	96	659	426	18
Grp Sat Flow(s),veh/h/ln	832	1885	1598	899	1885	1598	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.9	13.0	2.3	2.9	8.6	9.5	1.1	5.2	3.2	15.8	11.0	0.4
Cycle Q Clear(g_c), s	10.5	13.0	2.3	15.9	8.6	9.5	1.1	5.2	3.2	15.8	11.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	500	423	164	500	423	384	312	264	678	705	598
V/C Ratio(X)	0.13	0.86	0.19	0.69	0.62	0.67	0.11	0.56	0.36	0.97	0.60	0.03
Avail Cap(c_a), veh/h	221	500	423	164	500	423	485	312	264	678	705	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	21.0	17.0	29.4	19.4	19.7	18.4	23.0	22.2	15.5	15.1	11.8
Incr Delay (d2), s/veh	0.6	15.0	0.5	14.8	3.3	5.3	0.1	2.3	0.8	27.4	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.9	0.8	2.2	3.7	3.6	0.4	2.2	1.1	10.8	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	36.0	17.5	44.3	22.7	25.0	18.5	25.3	23.0	43.0	16.5	11.8
LnGrp LOS	C	D	B	D	C	C	B	C	C	D	B	B
Approach Vol, veh/h		537			704			314			1103	
Approach Delay, s/veh		32.7			27.1			23.7			32.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.4	28.4		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		15.0	3.1	13.0		17.9	17.8	7.2				
Green Ext Time (p_c), s		0.4	0.0	1.3		0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	923	102	28	525	97	82	15	40	75	15	63
Future Volume (veh/h)	83	923	102	28	525	97	82	15	40	75	15	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	932	103	28	530	98	83	15	40	76	15	64
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	516	1066	903	248	1003	850	217	61	163	239	42	179
Arrive On Green	0.08	0.57	0.57	0.04	0.53	0.53	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1795	1885	1598	1795	1885	1598	1320	451	1203	1349	310	1322
Grp Volume(v), veh/h	84	932	103	28	530	98	83	0	55	76	0	79
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	1885	1598	1320	0	1654	1349	0	1632
Q Serve(g_s), s	1.4	31.6	2.2	0.5	13.6	2.3	4.5	0.0	2.2	4.0	0.0	3.3
Cycle Q Clear(g_c), s	1.4	31.6	2.2	0.5	13.6	2.3	7.8	0.0	2.2	6.2	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.81
Lane Grp Cap(c), veh/h	516	1066	903	248	1003	850	217	0	224	239	0	221
V/C Ratio(X)	0.16	0.87	0.11	0.11	0.53	0.12	0.38	0.00	0.25	0.32	0.00	0.36
Avail Cap(c_a), veh/h	546	1165	987	343	1165	987	358	0	400	388	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	13.9	7.5	12.9	11.3	8.7	32.8	0.0	28.8	31.6	0.0	29.2
Incr Delay (d2), s/veh	0.1	8.1	0.1	0.1	0.9	0.1	1.1	0.0	0.6	0.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.4	0.6	0.2	4.8	0.7	1.5	0.0	0.9	1.3	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	22.0	7.6	13.0	12.3	8.8	33.9	0.0	29.4	32.3	0.0	30.2
LnGrp LOS	A	C	A	B	B	A	C	A	C	C	A	C
Approach Vol, veh/h		1119			656			138			155	
Approach Delay, s/veh		19.6			11.8			32.1			31.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	48.2		16.8	12.0	45.7		16.8
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7
Max Green Setting (Gmax), s	7.6	* 46		* 18	7.0	* 46		18.0
Max Q Clear Time (g_c+I1), s	2.5	33.6		8.2	3.4	15.6		9.8
Green Ext Time (p_c), s	0.0	8.5		0.4	0.0	7.6		0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	280	561	43	156	33	407	382	35	54	556	254
Future Volume (veh/h)	223	280	561	43	156	33	407	382	35	54	556	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	240	301	603	46	168	35	438	411	38	58	598	273
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	279	357	302	162	205	43	375	760	70	431	674	571
Arrive On Green	0.10	0.19	0.19	0.05	0.14	0.14	0.14	0.45	0.45	0.05	0.36	0.36
Sat Flow, veh/h	1795	1885	1598	1795	1513	315	1781	1686	156	1795	1885	1598
Grp Volume(v), veh/h	240	301	603	46	0	203	438	0	449	58	598	273
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1828	1781	0	1842	1795	1885	1598
Q Serve(g_s), s	6.5	13.9	11.2	0.0	0.0	9.7	13.0	0.0	15.9	1.8	26.9	7.7
Cycle Q Clear(g_c), s	6.5	13.9	11.2	0.0	0.0	9.7	13.0	0.0	15.9	1.8	26.9	7.7
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	279	357	302	162	0	248	375	0	831	431	674	571
V/C Ratio(X)	0.86	0.84	1.99	0.28	0.00	0.82	1.17	0.00	0.54	0.13	0.89	0.48
Avail Cap(c_a), veh/h	279	390	330	204	0	364	375	0	831	460	674	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	0.00	1.00	0.56	0.00	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	35.2	15.8	41.0	0.0	37.8	22.8	0.0	17.9	16.6	27.2	9.3
Incr Delay (d2), s/veh	15.9	10.0	455.2	1.0	0.0	9.0	91.4	0.0	1.4	0.1	16.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.0	42.0	1.0	0.0	4.8	14.2	0.0	6.4	0.7	13.9	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	45.2	471.0	41.9	0.0	46.8	114.2	0.0	19.4	16.7	43.2	12.2
LnGrp LOS	D	D	F	D	A	D	F	A	B	B	D	B
Approach Vol, veh/h		1144			249			887			929	
Approach Delay, s/veh		271.4			45.9			66.2			32.4	
Approach LOS		F			D			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	46.2	10.2	23.0	19.0	37.8	14.9	18.3
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.6	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	13.8	17.9	2.0	15.9	15.0	28.9	8.5	11.7
Green Ext Time (p_c), s	0.0	4.4	0.0	1.2	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	128.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	2	152	3	199	7	608	157	279	841	9
Future Volume (veh/h)	5	2	2	152	3	199	7	608	157	279	841	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1870	1900
Adj Flow Rate, veh/h	5	2	2	158	3	207	7	633	164	291	876	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	0	2	0
Cap, veh/h	62	6	2	298	5	315	364	988	844	477	1155	994
Arrive On Green	0.03	0.03	0.03	0.11	0.20	0.20	0.02	0.52	0.52	0.15	0.82	0.82
Sat Flow, veh/h	0	186	53	1810	23	1591	1810	1885	1610	1810	1870	1610
Grp Volume(v), veh/h	9	0	0	158	0	210	7	633	164	291	876	9
Grp Sat Flow(s),veh/h/ln	239	0	0	1810	0	1614	1810	1885	1610	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	2.2	0.0	10.8	0.2	21.6	2.6	6.0	20.0	0.1
Cycle Q Clear(g_c), s	3.0	0.0	0.0	2.2	0.0	10.8	0.2	21.6	2.6	6.0	20.0	0.1
Prop In Lane	0.56		0.22	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	0	0	298	0	320	364	988	844	477	1155	994
V/C Ratio(X)	0.13	0.00	0.00	0.53	0.00	0.66	0.02	0.64	0.19	0.61	0.76	0.01
Avail Cap(c_a), veh/h	255	0	0	322	0	556	533	988	844	477	1155	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.21	0.21	0.21
Uniform Delay (d), s/veh	42.5	0.0	0.0	35.9	0.0	33.3	10.2	15.3	3.3	11.0	4.9	3.1
Incr Delay (d2), s/veh	1.7	0.0	0.0	2.1	0.0	4.8	0.0	3.2	0.5	0.6	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.2	0.0	4.5	0.1	8.8	1.6	1.7	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	0.0	38.0	0.0	38.1	10.3	18.5	3.8	11.6	5.9	3.1
LnGrp LOS	D	A	A	D	A	D	B	B	A	B	A	A
Approach Vol, veh/h		9			368			804			1176	
Approach Delay, s/veh		44.2			38.1			15.4			7.3	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	52.2	14.8	8.0	6.6	60.6		22.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	10.0	34.0	11.0	15.0	10.0	34.0		31.0
Max Q Clear Time (g_c+I1), s	19.0	23.6	4.2	5.0	2.2	22.0		12.8
Green Ext Time (p_c), s	0.3	5.4	0.3	0.0	0.0	7.5		2.0

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

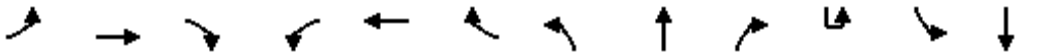
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	395	305	48	54	48
Future Vol, veh/h	43	395	305	48	54	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	425	328	52	58	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	380	0	-	0	871	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	517	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1178	-	-	-	322	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1178	-	-	-	306	690
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1178	-	-	-	415
HCM Lane V/C Ratio	0.039	-	-	-	0.264
HCM Control Delay (s)	8.2	0	-	-	16.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	79	25	317	24	15	8	256	646	32	100	14	700
Future Volume (veh/h)	79	25	317	24	15	8	256	646	32	100	14	700
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1870	1870		1900	1885
Adj Flow Rate, veh/h	82	26	330	25	16	8	267	673	33		15	729
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96		0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	1	2	2		0	1
Cap, veh/h	100	19	456	91	38	456	425	1420	70		356	1110
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.12	0.41	0.41		0.02	0.31
Sat Flow, veh/h	0	67	1610	0	135	1610	1795	3448	169		1810	3582
Grp Volume(v), veh/h	108	0	330	41	0	8	267	347	359		15	729
Grp Sat Flow(s),veh/h/ln	67	0	1610	135	0	1610	1795	1777	1840		1810	1791
Q Serve(g_s), s	0.0	0.0	11.7	0.0	0.0	0.2	5.9	9.1	9.1		0.4	11.2
Cycle Q Clear(g_c), s	18.0	0.0	11.7	18.0	0.0	0.2	5.9	9.1	9.1		0.4	11.2
Prop In Lane	0.76		1.00	0.61		1.00	1.00		0.09		1.00	
Lane Grp Cap(c), veh/h	119	0	456	129	0	456	425	732	758		356	1110
V/C Ratio(X)	0.91	0.00	0.72	0.32	0.00	0.02	0.63	0.47	0.47		0.04	0.66
Avail Cap(c_a), veh/h	119	0	456	129	0	456	429	732	758		544	1465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	20.5	18.9	0.0	16.4	13.0	13.7	13.7		14.4	19.0
Incr Delay (d2), s/veh	55.8	0.0	5.6	1.4	0.0	0.0	2.6	1.0	1.0		0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	4.9	0.5	0.0	0.1	2.1	3.1	3.2		0.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.5	0.0	26.2	20.3	0.0	16.4	15.5	14.7	14.7		14.4	20.4
LnGrp LOS	F	A	C	C	A	B	B	B	B		B	C
Approach Vol, veh/h		438			49			973				839
Approach Delay, s/veh		40.5			19.7			14.9				19.9
Approach LOS		D			B			B				B

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	32.2		24.0	13.9	25.7		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	26.0		18.0	8.0	26.0		18.0				
Max Q Clear Time (g_c+I1), s	2.4	11.1		20.0	7.9	13.2		20.0				
Green Ext Time (p_c), s	0.0	6.1		0.0	0.0	6.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		21.7
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	91
Future Volume (veh/h)	91
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	95
Peak Hour Factor	0.96
Percent Heavy Veh, %	0
Cap, veh/h	499
Arrive On Green	0.31
Sat Flow, veh/h	1610
Grp Volume(v), veh/h	95
Grp Sat Flow(s),veh/h/ln	1610
Q Serve(g_s), s	2.8
Cycle Q Clear(g_c), s	2.8
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	499
V/C Ratio(X)	0.19
Avail Cap(c_a), veh/h	659
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	16.1
Incr Delay (d2), s/veh	0.4
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.9
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	16.5
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	232	0	0	7	62	772	5	2	701	99
Future Vol, veh/h	0	0	232	0	0	7	62	772	5	2	701	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	0	0	0	2	2	0	0	2	2
Mvmt Flow	0	0	244	0	0	7	65	813	5	2	738	104

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	369	-	-	407	842	0	0	818	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.9	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.3	2.22	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	628	0	0	599	789	-	-	819	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	628	-	-	599	789	-	-	819	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	11.1	0.7	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	789	-	-	628	599	819	-	-
HCM Lane V/C Ratio	0.083	-	-	0.389	0.012	0.003	-	-
HCM Control Delay (s)	10	-	-	14.3	11.1	9.4	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.8	0	0	-	-

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	135	204	20	6	135	23	10	59	11	12	78	82
Future Vol, veh/h	135	204	20	6	135	23	10	59	11	12	78	82
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	5	0	0	1	5	0	0	0	0	0	0
Mvmt Flow	150	227	22	7	150	26	11	66	12	13	87	91
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.2	10	9.6	10.4
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	38%	4%	7%
Vol Thru, %	74%	57%	82%	45%
Vol Right, %	14%	6%	14%	48%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	359	164	172
LT Vol	10	135	6	12
Through Vol	59	204	135	78
RT Vol	11	20	23	82
Lane Flow Rate	89	399	182	191
Geometry Grp	1	1	1	1
Degree of Util (X)	0.14	0.558	0.262	0.28
Departure Headway (Hd)	5.674	5.032	5.172	5.276
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	631	722	694	680
Service Time	3.72	3.032	3.206	3.316
HCM Lane V/C Ratio	0.141	0.553	0.262	0.281
HCM Control Delay	9.6	14.2	10	10.4
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.5	3.5	1	1.1

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	327	49	12	221	82	35	5	20	82	10	4
Future Vol, veh/h	1	327	49	12	221	82	35	5	20	82	10	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	348	52	13	235	87	37	5	21	87	11	4
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	15.6	12.6	9.7	10.4
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	58%	100%	0%	100%	0%	85%
Vol Thru, %	8%	0%	87%	0%	73%	10%
Vol Right, %	33%	0%	13%	0%	27%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	1	376	12	303	96
LT Vol	35	1	0	12	0	82
Through Vol	5	0	327	0	221	10
RT Vol	20	0	49	0	82	4
Lane Flow Rate	64	1	400	13	322	102
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.106	0.002	0.594	0.021	0.476	0.173
Departure Headway (Hd)	5.974	5.941	5.344	6.011	5.315	6.102
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	599	605	680	598	680	587
Service Time	4.018	3.649	3.052	3.72	3.023	4.143
HCM Lane V/C Ratio	0.107	0.002	0.588	0.022	0.474	0.174
HCM Control Delay	9.7	8.7	15.6	8.8	12.8	10.4
HCM Lane LOS	A	A	C	A	B	B
HCM 95th-tile Q	0.4	0	3.9	0.1	2.6	0.6

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	601	11	2	861
Future Vol, veh/h	9	5	601	11	2	861
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	1	1
Mvmt Flow	10	6	668	12	2	957

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1629	668	0	0	680	0
Stage 1	668	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	112	458	-	-	917	-
Stage 1	510	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	111	458	-	-	917	-
Mov Cap-2 Maneuver	111	-	-	-	-	-
Stage 1	510	-	-	-	-	-
Stage 2	369	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.4	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	152	917	-
HCM Lane V/C Ratio	-	-	0.102	0.002	-
HCM Control Delay (s)	-	-	31.4	8.9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1089	722	291	603	435	436
Future Volume (vph)	1089	722	291	603	435	436
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.1	59.1	88.7	87.5	48.1	48.1
Actuated g/C Ratio	0.39	0.39	0.59	0.58	0.32	0.32
v/c Ratio	1.03	0.80	1.15	0.37	1.02	0.76
Control Delay	79.6	9.3	141.4	17.3	96.9	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	9.3	141.4	17.3	96.9	23.6
LOS	E	A	F	B	F	C
Approach Delay	51.6			57.7	60.2	
Approach LOS	D			E	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 55.2	Intersection LOS: E
Intersection Capacity Utilization 87.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1184	785	316	655	473	474
v/c Ratio	1.03	0.80	1.15	0.37	1.02	0.76
Control Delay	79.6	9.3	141.4	17.3	96.9	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	9.3	141.4	17.3	96.9	23.6
Queue Length 50th (ft)	~651	4	~313	172	~490	150
Queue Length 95th (ft)	#791	150	#513	214	#713	307
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1146	985	275	1784	463	626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.80	1.15	0.37	1.02	0.76

Intersection Summary

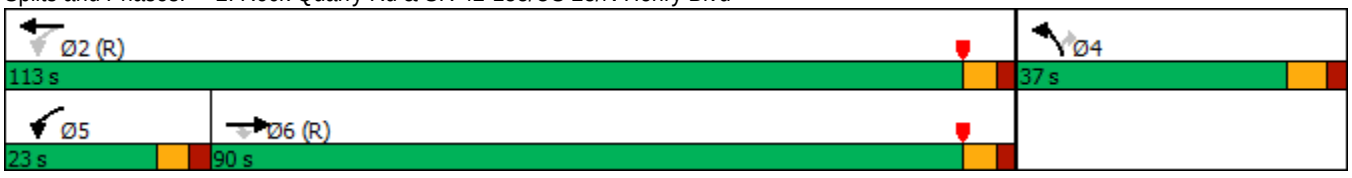
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1668	311	294	1008	336	400
Future Volume (vph)	1668	311	294	1008	336	400
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.9	83.9	107.0	106.9	30.1	30.1
Actuated g/C Ratio	0.56	0.56	0.71	0.71	0.20	0.20
v/c Ratio	1.06	0.32	1.23	0.51	0.99	0.88
Control Delay	59.0	3.0	173.2	10.7	103.2	50.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	3.0	173.2	10.7	103.2	50.4
LOS	E	A	F	B	F	D
Approach Delay	50.2			47.4	74.5	
Approach LOS	D			D	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 53.7	Intersection LOS: D
Intersection Capacity Utilization 96.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1738	324	306	1050	350	417
v/c Ratio	1.06	0.32	1.23	0.51	0.99	0.88
Control Delay	59.0	3.0	173.2	10.7	103.2	50.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	3.0	173.2	10.7	103.2	50.4
Queue Length 50th (ft)	~977	4	~318	222	345	225
Queue Length 95th (ft)	#1113	m71	#515	269	#555	#418
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1641	1028	249	2074	355	475
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.32	1.23	0.51	0.99	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1980	10	1320	26	16
Future Volume (vph)	1980	10	1320	26	16
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	136.0	136.0	136.0	14.0	14.0
Total Split (%)	90.7%	90.7%	90.7%	9.3%	9.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	133.9	133.9	133.9	7.3	7.3
Actuated g/C Ratio	0.89	0.89	0.89	0.05	0.05
v/c Ratio	0.78	0.07	0.51	0.31	0.17
Control Delay	7.3	2.7	3.6	78.3	30.8
Queue Delay	6.0	0.0	0.1	0.0	0.0
Total Delay	13.3	2.7	3.7	78.3	30.8
LOS	B	A	A	E	C
Approach Delay	13.3		3.7	60.6	
Approach LOS	B		A	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 90 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2044	10	1347	27	16
v/c Ratio	0.78	0.07	0.51	0.31	0.17
Control Delay	7.3	2.7	3.6	78.3	30.8
Queue Delay	6.0	0.0	0.1	0.0	0.0
Total Delay	13.3	2.7	3.7	78.3	30.8
Queue Length 50th (ft)	90	1	66	26	0
Queue Length 95th (ft)	m771	m3	m333	61	26
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2617	138	2622	96	101
Starvation Cap Reductn	526	0	0	0	0
Spillback Cap Reductn	0	0	368	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.98	0.07	0.60	0.28	0.16

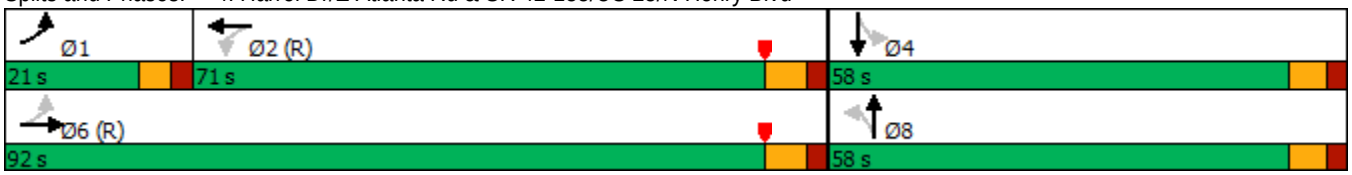
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	243	1570	16	1047	27	37	351	5
Future Volume (vph)	243	1570	16	1047	27	37	351	5
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	21.0	92.0	71.0	71.0	58.0	58.0	58.0	58.0
Total Split (%)	14.0%	61.3%	47.3%	47.3%	38.7%	38.7%	38.7%	38.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	86.0	84.9	63.9	63.9		51.3		51.3
Actuated g/C Ratio	0.57	0.57	0.43	0.43		0.34		0.34
v/c Ratio	1.28	0.99	0.30	1.15		0.27		1.24
Control Delay	172.1	15.6	40.6	107.0		31.8		166.2
Queue Delay	0.0	20.2	0.0	0.0		0.0		0.3
Total Delay	172.1	35.8	40.6	107.0		31.9		166.4
LOS	F	D	D	F		C		F
Approach Delay		53.9		106.2		31.9		166.4
Approach LOS		D		F		C		F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 146 (97%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 86.7	Intersection LOS: F
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	253	1649	17	1406	142	534
v/c Ratio	1.28	0.99	0.30	1.15	0.27	1.24
Control Delay	172.1	15.6	40.6	107.0	31.8	166.2
Queue Delay	0.0	20.2	0.0	0.0	0.0	0.3
Total Delay	172.1	35.8	40.6	107.0	31.9	166.4
Queue Length 50th (ft)	~266	544	8	~846	85	~637
Queue Length 95th (ft)	m#196	m283	m25	#965	144	#872
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	198	1673	57	1225	532	431
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	107	0	0	16	13
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.28	1.05	0.30	1.15	0.28	1.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

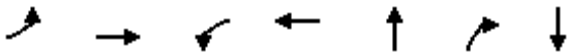
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	27	1822	229	1143	180	55	205	13	54
Future Volume (vph)	27	1822	229	1143	180	55	205	13	54
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.5	94.3	114.0	106.2		22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.76	0.71		0.15	0.15		0.15
v/c Ratio	0.08	1.23	1.14	0.57		1.27	0.63		0.53
Control Delay	5.4	136.3	112.8	6.6		205.4	36.8		63.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.4	136.3	112.8	6.6		205.4	36.8		63.0
LOS	A	F	F	A		F	D		E
Approach Delay		134.6		24.1		126.9			63.0
Approach LOS		F		C		F			E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 94.7	Intersection LOS: F
Intersection Capacity Utilization 109.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	28	2196	234	1184	240	209	98
v/c Ratio	0.08	1.23	1.14	0.57	1.27	0.63	0.53
Control Delay	5.4	136.3	112.8	6.6	205.4	36.8	63.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	136.3	112.8	6.6	205.4	36.8	63.0
Queue Length 50th (ft)	6	~1392	~221	147	~295	90	79
Queue Length 95th (ft)	14	#1523	m#181	m130	#476	182	144
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	333	1784	205	2090	189	332	184
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.23	1.14	0.57	1.27	0.63	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

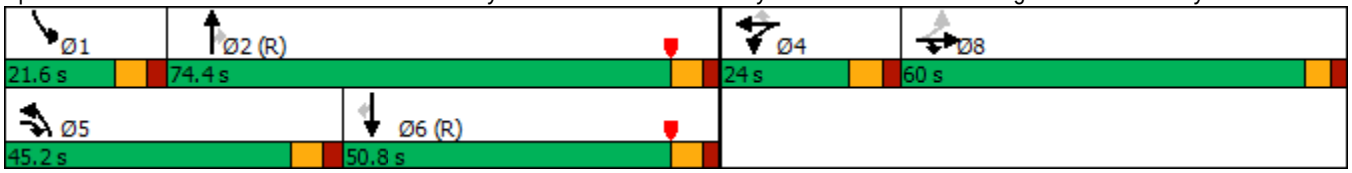
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

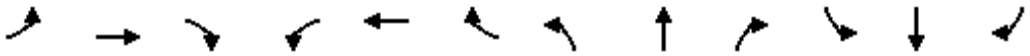
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	173	1313	125	172	126	757	439	71	70	706	151
Future Volume (vph)	282	173	1313	125	172	126	757	439	71	70	706	151
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	60.0	60.0		24.0	24.0	24.0	45.2	74.4	74.4	21.6	50.8	50.8
Total Split (%)	33.3%	33.3%		13.3%	13.3%	13.3%	25.1%	41.3%	41.3%	12.0%	28.2%	28.2%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	54.0	54.0	99.2	17.0	17.0	17.0	38.4	68.7	68.7	13.5	43.9	43.9
Actuated g/C Ratio	0.30	0.30	0.55	0.09	0.09	0.09	0.21	0.38	0.38	0.08	0.24	0.24
v/c Ratio	0.82	0.32	1.02	0.78	1.02	0.47	1.24	0.41	0.11	0.55	1.03	0.36
Control Delay	60.1	39.9	78.3	108.3	150.3	13.6	175.1	42.6	2.4	95.9	105.7	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	39.9	78.3	108.3	150.3	13.6	175.1	42.6	2.4	95.9	105.7	9.3
LOS	E	D	E	F	F	B	F	D	A	F	F	A
Approach Delay		71.6			97.2			119.6			89.3	
Approach LOS		E			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 91.7	Intersection LOS: F
Intersection Capacity Utilization 89.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	294	180	1368	130	179	131	789	457	74	73	735	157
v/c Ratio	0.82	0.32	1.02	0.78	1.02	0.47	1.24	0.41	0.11	0.55	1.03	0.36
Control Delay	60.1	39.9	78.3	108.3	150.3	13.6	175.1	42.6	2.4	95.9	105.7	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	39.9	78.3	108.3	150.3	13.6	175.1	42.6	2.4	95.9	105.7	9.3
Queue Length 50th (ft)	362	172	~962	153	~223	0	~592	211	0	84	~485	0
Queue Length 95th (ft)	m410	m191	#1117	#268	#394	57	#726	266	16	145	#621	65
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	360	558	1338	167	175	279	638	1102	667	144	715	438
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.32	1.02	0.78	1.02	0.47	1.24	0.41	0.11	0.51	1.03	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

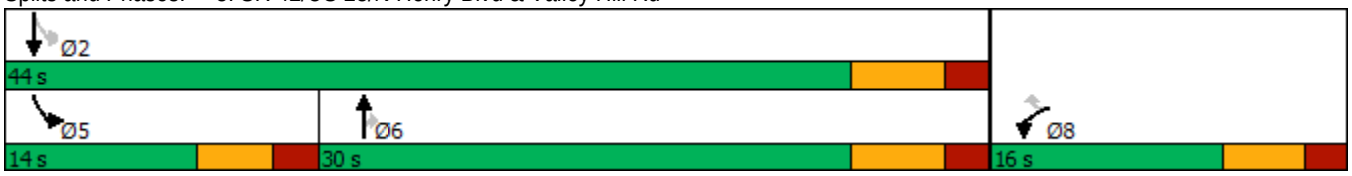
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	123	119	655	106	282	965
Future Volume (vph)	123	119	655	106	282	965
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	30.0	30.0	14.0	44.0
Total Split (%)	26.7%	26.7%	50.0%	50.0%	23.3%	73.3%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.8	10.8	20.3	20.3	35.9	37.1
Actuated g/C Ratio	0.20	0.20	0.38	0.38	0.68	0.70
v/c Ratio	0.35	0.29	0.59	0.16	0.51	0.48
Control Delay	25.1	7.4	16.4	3.7	7.8	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	7.4	16.4	3.7	7.8	6.6
LOS	C	A	B	A	A	A
Approach Delay	16.5		14.6			6.9
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	126	121	668	108	288	985
v/c Ratio	0.35	0.29	0.59	0.16	0.51	0.48
Control Delay	25.1	7.4	16.4	3.7	7.8	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	7.4	16.4	3.7	7.8	6.6
Queue Length 50th (ft)	40	0	94	0	36	85
Queue Length 95th (ft)	85	37	142	24	65	128
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	368	425	1399	811	573	2107
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.28	0.48	0.13	0.50	0.47

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	1937	50	1192	25	84	5	87	10	7	24
Future Volume (vph)	23	1937	50	1192	25	84	5	87	10	7	24
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	12.0	139.0	12.0	139.0	139.0	29.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	6.7%	77.2%	6.7%	77.2%	77.2%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	145.2	139.4	146.9	141.9	141.9		17.1	17.1		17.1	17.1
Actuated g/C Ratio	0.81	0.77	0.82	0.79	0.79		0.10	0.10		0.10	0.10
v/c Ratio	0.07	0.89	0.39	0.52	0.02		0.73	0.43		0.13	0.12
Control Delay	1.7	7.7	26.4	6.1	0.0		108.9	27.5		74.4	1.2
Queue Delay	0.0	2.7	0.0	0.4	0.0		0.0	0.0		0.0	0.0
Total Delay	1.7	10.4	26.4	6.6	0.0		108.9	27.5		74.4	1.2
LOS	A	B	C	A	A		F	C		E	A
Approach Delay		10.3		7.2			68.4			31.9	
Approach LOS		B		A			E			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 171 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 86.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	2110	53	1255	26	93	92	18	25
v/c Ratio	0.07	0.89	0.39	0.52	0.02	0.73	0.43	0.13	0.12
Control Delay	1.7	7.7	26.4	6.1	0.0	108.9	27.5	74.4	1.2
Queue Delay	0.0	2.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	10.4	26.4	6.6	0.0	108.9	27.5	74.4	1.2
Queue Length 50th (ft)	2	174	15	603	0	108	21	20	0
Queue Length 95th (ft)	m2	105	m18	m532	m0	176	83	48	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	344	2377	138	2431	1260	164	256	179	243
Starvation Cap Reductn	0	171	0	623	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.96	0.38	0.69	0.02	0.57	0.36	0.10	0.10

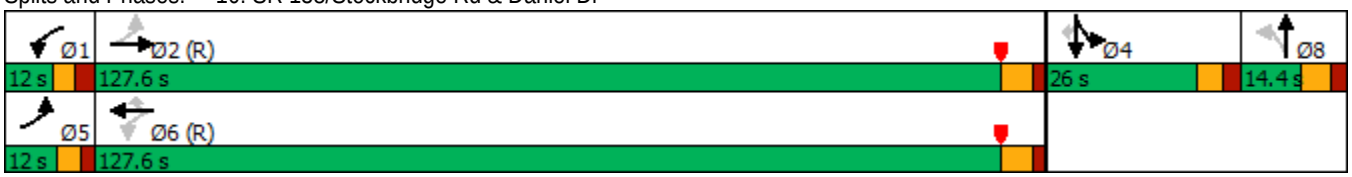
Intersection Summary

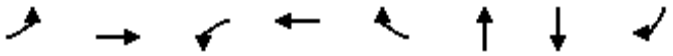
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	119	1905	9	1226	93	11	4	5	151
Future Volume (vph)	119	1905	9	1226	93	11	4	5	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	12.0	127.6	12.0	127.6	127.6	14.4	14.4	26.0	26.0
Total Split (%)	6.7%	70.9%	6.7%	70.9%	70.9%	8.0%	8.0%	14.4%	14.4%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	140.3	136.2	135.7	128.9	128.9		8.0	18.3	18.3
Actuated g/C Ratio	0.78	0.76	0.75	0.72	0.72		0.04	0.10	0.10
v/c Ratio	0.39	0.91	0.07	0.57	0.08		0.35	0.82	0.54
Control Delay	7.4	26.0	3.0	4.6	0.2		71.0	110.5	21.9
Queue Delay	0.0	46.8	0.0	0.2	0.0		0.0	0.0	0.2
Total Delay	7.4	72.7	3.0	4.8	0.2		71.0	110.5	22.2
LOS	A	E	A	A	A		E	F	C
Approach Delay		69.0		4.4			71.0	65.3	
Approach LOS		E		A			E	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 159 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 45.5	Intersection LOS: D
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	121	1973	9	1251	95	25	147	154
v/c Ratio	0.39	0.91	0.07	0.57	0.08	0.35	0.82	0.54
Control Delay	7.4	26.0	3.0	4.6	0.2	71.0	110.5	21.9
Queue Delay	0.0	46.8	0.0	0.2	0.0	0.0	0.0	0.2
Total Delay	7.4	72.7	3.0	4.8	0.2	71.0	110.5	22.2
Queue Length 50th (ft)	4	595	1	96	1	18	172	18
Queue Length 95th (ft)	m2	m24	m2	101	0	55	#277	98
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	309	2163	142	2208	1160	72	197	297
Starvation Cap Reductn	0	873	0	108	0	0	0	0
Spillback Cap Reductn	0	25	0	266	0	0	0	11
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	1.53	0.06	0.64	0.08	0.35	0.75	0.54

Intersection Summary

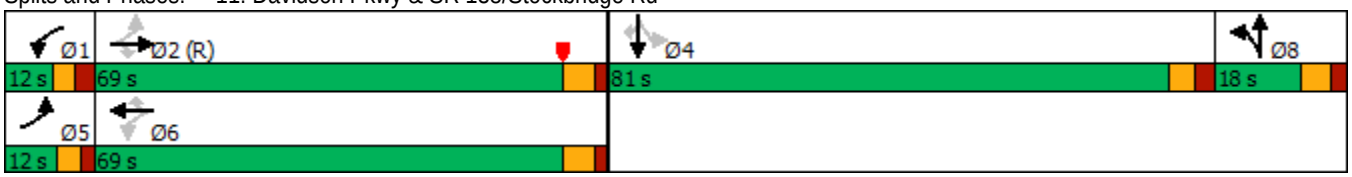
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

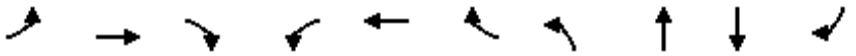
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	1924	408	45	1248	61	272	28	70	27	188
Future Volume (vph)	165	1924	408	45	1248	61	272	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	18.0	18.0	81.0	81.0	81.0
Total Split (%)	6.7%	38.3%	38.3%	6.7%	38.3%	38.3%	10.0%	10.0%	45.0%	45.0%	45.0%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	72.0	65.1	65.1	69.9	62.7	62.7	11.7	11.7		75.0	75.0
Actuated g/C Ratio	0.40	0.36	0.36	0.39	0.35	0.35	0.06	0.06		0.42	0.42
v/c Ratio	1.56	1.94	0.67	0.45	1.30	0.10	1.72	1.56		2.10	0.27
Control Delay	289.8	450.4	34.2	47.5	177.2	3.7	400.8	334.0		586.8	18.6
Queue Delay	0.0	0.8	5.7	0.0	0.3	0.0	0.0	0.2		17.6	0.0
Total Delay	289.8	451.2	40.0	47.5	177.5	3.7	400.8	334.1		604.4	18.6
LOS	F	F	D	D	F	A	F	F		F	B
Approach Delay		373.4			165.3			368.2		217.8	
Approach LOS		F			F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 96 (53%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.10	
Intersection Signal Delay: 300.3	Intersection LOS: F
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	172	2004	425	47	1300	64	187	179	101	196
v/c Ratio	1.56	1.94	0.67	0.45	1.30	0.10	1.72	1.56	2.10	0.27
Control Delay	289.8	450.4	34.2	47.5	177.2	3.7	400.8	334.0	586.8	18.6
Queue Delay	0.0	0.8	5.7	0.0	0.3	0.0	0.0	0.2	17.6	0.0
Total Delay	289.8	451.2	40.0	47.5	177.5	3.7	400.8	334.1	604.4	18.6
Queue Length 50th (ft)	~237	~1947	319	20	~1016	1	~341	~303	~187	76
Queue Length 95th (ft)	m#234	m#1894	m316	m62	#1162	16	#526	#485	#272	141
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	110	1035	632	105	997	610	109	115	48	713
Starvation Cap Reductn	0	69	151	0	0	0	0	0	0	0
Spillback Cap Reductn	0	158	0	0	56	0	0	1	17	1
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.56	2.29	0.88	0.45	1.38	0.10	1.72	1.57	3.26	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

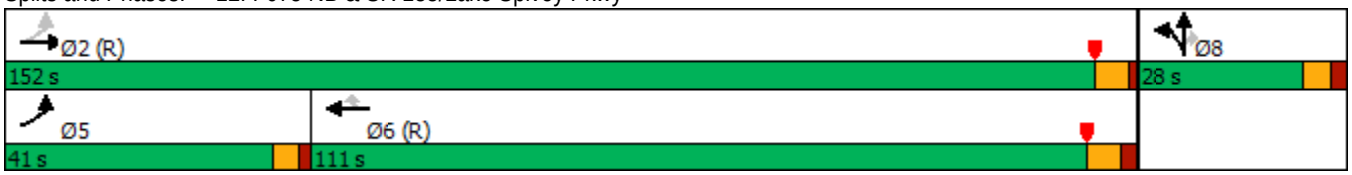
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	436	2326	1458	301	0	188
Future Volume (vph)	436	2326	1458	301	0	188
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	149.2	148.2	104.0	104.0	19.7	19.7
Actuated g/C Ratio	0.83	0.82	0.58	0.58	0.11	0.11
v/c Ratio	0.97	1.03	0.92	0.31	0.32	0.89
Control Delay	68.1	22.9	10.9	0.9	77.6	92.4
Queue Delay	0.0	32.1	45.9	1.1	0.0	17.1
Total Delay	68.1	55.1	56.8	2.0	77.6	109.5
LOS	E	E	E	A	E	F
Approach Delay		57.1	47.4		101.9	
Approach LOS		E	D		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 55.8	Intersection LOS: E
Intersection Capacity Utilization 101.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	454	2423	1519	314	61	196
v/c Ratio	0.97	1.03	0.92	0.31	0.32	0.89
Control Delay	68.1	22.9	10.9	0.9	77.6	92.4
Queue Delay	0.0	32.1	45.9	1.1	0.0	17.1
Total Delay	68.1	55.1	56.8	2.0	77.6	109.5
Queue Length 50th (ft)	~451	~1618	954	30	67	167
Queue Length 95th (ft)	m363	m283	m162	m19	119	#304
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	466	2359	1655	1001	215	240
Starvation Cap Reductn	0	217	374	453	0	0
Spillback Cap Reductn	0	1336	0	0	0	36
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	2.37	1.19	0.57	0.28	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

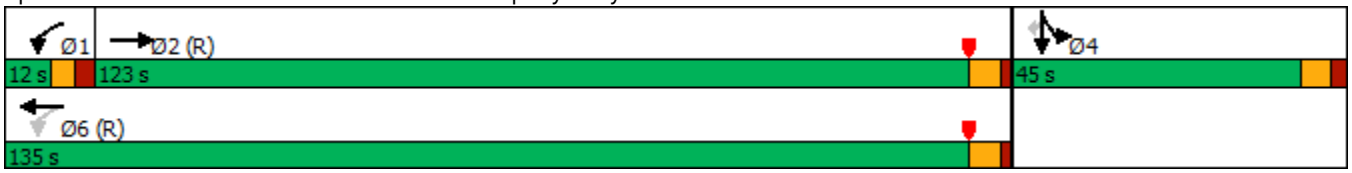
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

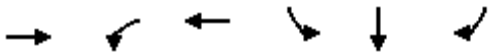
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2222	117	1398	564	0	706
Future Volume (vph)	2222	117	1398	564	0	706
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	1.27	1.20	0.70	0.81	0.81	1.22
Control Delay	147.0	171.6	9.0	85.0	85.2	170.4
Queue Delay	0.2	0.0	0.1	0.0	0.0	0.0
Total Delay	147.2	171.6	9.1	85.0	85.2	170.4
LOS	F	F	A	F	F	F
Approach Delay	147.2		21.7		132.5	
Approach LOS	F		C		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 106.1	Intersection LOS: F
Intersection Capacity Utilization 101.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2364	121	1441	290	291	728
v/c Ratio	1.27	1.20	0.70	0.81	0.81	1.22
Control Delay	147.0	171.6	9.0	85.0	85.2	170.4
Queue Delay	0.2	0.0	0.1	0.0	0.0	0.0
Total Delay	147.2	171.6	9.1	85.0	85.2	170.4
Queue Length 50th (ft)	~1841	~123	170	347	348	~597
Queue Length 95th (ft)	#1952	m#156	250	#500	#500	#743
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1856	101	2054	359	359	596
Starvation Cap Reductn	0	0	78	0	0	0
Spillback Cap Reductn	95	0	49	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	1.20	0.73	0.81	0.81	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

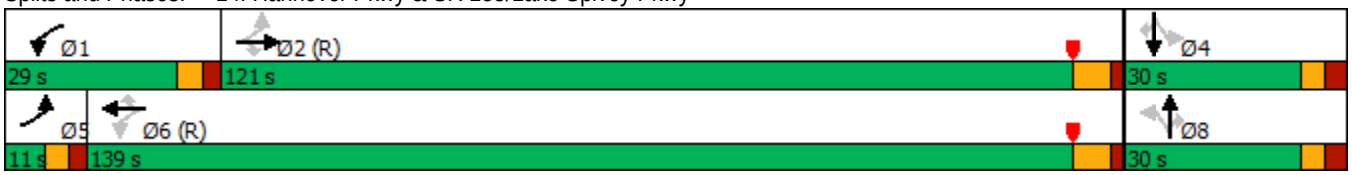
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

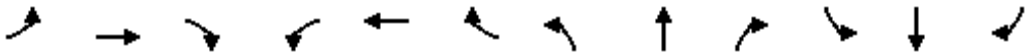
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1938	47	197	1736	95	65	23	197	85	17	46
Future Volume (vph)	45	1938	47	197	1736	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.8	123.3	123.3	150.0	140.4	140.4	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.26	0.92	0.04	0.83	0.73	0.08	0.50	0.13	0.69	0.66	0.10	0.20
Control Delay	4.3	19.7	0.0	62.7	13.9	5.0	88.6	73.4	33.1	100.2	72.5	1.9
Queue Delay	0.0	36.7	0.0	0.0	1.5	0.0	0.0	0.0	2.8	2.4	0.0	0.0
Total Delay	4.3	56.4	0.0	62.7	15.3	5.0	88.6	73.4	35.8	102.6	72.5	1.9
LOS	A	E	A	E	B	A	F	E	D	F	E	A
Approach Delay		53.9			19.4			51.0			67.9	
Approach LOS		D			B			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 38.6	Intersection LOS: D
Intersection Capacity Utilization 91.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2019	49	205	1808	99	68	24	205	89	18	48
v/c Ratio	0.26	0.92	0.04	0.83	0.73	0.08	0.50	0.13	0.69	0.66	0.10	0.20
Control Delay	4.3	19.7	0.0	62.7	13.9	5.0	88.6	73.4	33.1	100.2	72.5	1.9
Queue Delay	0.0	36.7	0.0	0.0	1.5	0.0	0.0	0.0	2.8	2.4	0.0	0.0
Total Delay	4.3	56.4	0.0	62.7	15.3	5.0	88.6	73.4	35.8	102.6	72.5	1.9
Queue Length 50th (ft)	7	1165	0	192	407	15	78	26	55	103	20	0
Queue Length 95th (ft)	m8	m#1416	m0	m236	m463	m23	132	58	148	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	186	2188	1112	279	2491	1246	182	244	343	181	244	289
Starvation Cap Reductn	0	37	0	0	457	0	0	0	0	0	0	0
Spillback Cap Reductn	0	318	0	0	0	0	0	0	63	32	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	1.08	0.04	0.73	0.89	0.08	0.37	0.10	0.73	0.60	0.07	0.17

Intersection Summary

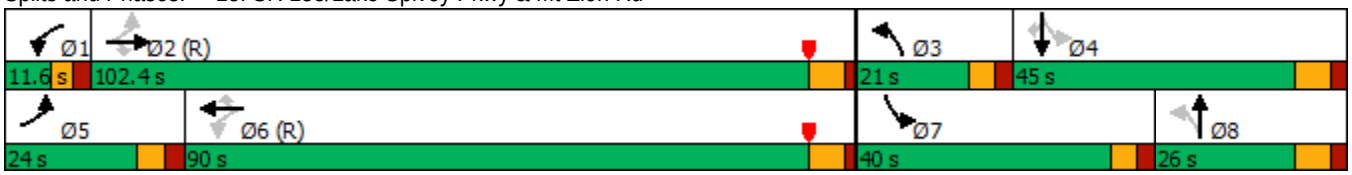
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	212	1533	168	47	1365	369	148	87	382	79	211
Future Volume (vph)	212	1533	168	47	1365	369	148	87	382	79	211
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	109.1	99.5	99.5	90.7	83.6	83.6	33.0	17.5	58.6	37.2	37.2
Actuated g/C Ratio	0.61	0.55	0.55	0.50	0.46	0.46	0.18	0.10	0.33	0.21	0.21
v/c Ratio	0.99	0.92	0.19	0.46	0.98	0.46	0.57	0.75	0.98	0.22	0.48
Control Delay	107.3	32.5	6.1	30.8	56.8	12.9	56.2	97.3	91.2	60.8	18.7
Queue Delay	0.0	2.0	0.0	0.0	2.6	0.0	0.0	0.0	22.7	0.0	0.0
Total Delay	107.3	34.5	6.1	30.8	59.4	12.9	56.2	97.3	113.9	60.8	18.8
LOS	F	C	A	C	E	B	E	F	F	E	B
Approach Delay		40.1			49.0			75.3		77.8	
Approach LOS		D			D			E		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 51.1	Intersection LOS: D
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	226	1631	179	50	1452	393	157	136	406	84	224
v/c Ratio	0.99	0.92	0.19	0.46	0.98	0.46	0.57	0.75	0.98	0.22	0.48
Control Delay	107.3	32.5	6.1	30.8	56.8	12.9	56.2	97.3	91.2	60.8	18.7
Queue Delay	0.0	2.0	0.0	0.0	2.6	0.0	0.0	0.0	22.7	0.0	0.0
Total Delay	107.3	34.5	6.1	30.8	59.4	12.9	56.2	97.3	113.9	60.8	18.8
Queue Length 50th (ft)	~246	757	12	23	856	88	136	147	417	83	48
Queue Length 95th (ft)	m#351	#1130	m47	m30	#1043	117	203	#239	#596	139	138
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	228	1767	934	109	1483	848	282	195	416	392	471
Starvation Cap Reductn	0	59	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	49	0	0	21	0	0	0	32	0	2
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.95	0.19	0.46	0.99	0.46	0.56	0.70	1.06	0.21	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

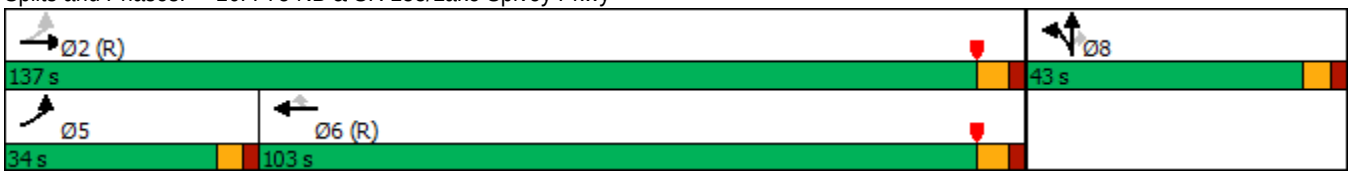
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	284	1921	1327	508	0	169
Future Volume (vph)	284	1921	1327	508	0	169
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	138.8	137.4	106.0	106.0	29.6	29.6
Actuated g/C Ratio	0.77	0.76	0.59	0.59	0.16	0.16
v/c Ratio	0.84	0.86	0.77	0.51	0.87	0.60
Control Delay	40.4	29.3	15.5	1.6	100.9	54.9
Queue Delay	0.0	27.5	0.9	0.0	2.9	0.0
Total Delay	40.4	56.8	16.4	1.6	103.8	54.9
LOS	D	E	B	A	F	D
Approach Delay		54.7	12.3		83.2	
Approach LOS		D	B		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	309	2088	1442	552	253	184
v/c Ratio	0.84	0.86	0.77	0.51	0.87	0.60
Control Delay	40.4	29.3	15.5	1.6	100.9	54.9
Queue Delay	0.0	27.5	0.9	0.0	2.9	0.0
Total Delay	40.4	56.8	16.4	1.6	103.8	54.9
Queue Length 50th (ft)	215	1140	264	0	295	141
Queue Length 95th (ft)	m250	m1132	m745	m3	391	223
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	397	2438	1880	1073	362	369
Starvation Cap Reductn	0	457	194	0	0	0
Spillback Cap Reductn	0	63	183	0	45	1
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	1.05	0.86	0.51	0.80	0.50

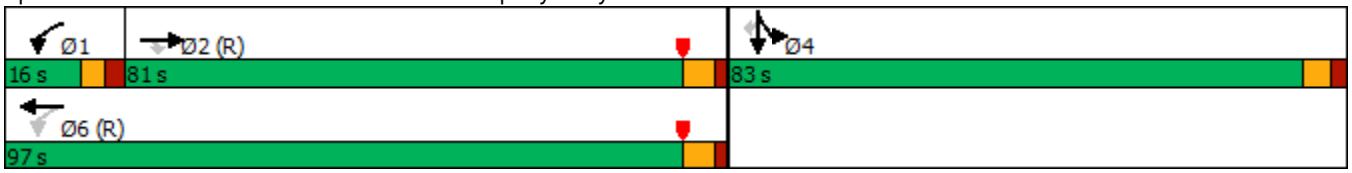
Intersection Summary

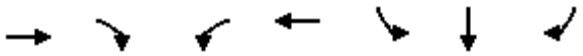
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1321	291	171	1476	885	0	751
Future Volume (vph)	1321	291	171	1476	885	0	751
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	91.2	90.7	76.8	76.8	76.8
Actuated g/C Ratio	0.42	0.42	0.51	0.50	0.43	0.43	0.43
v/c Ratio	1.06	0.37	1.28	0.98	0.66	0.66	1.13
Control Delay	78.7	5.1	194.1	49.2	46.4	46.5	119.2
Queue Delay	0.0	0.0	0.0	24.6	55.7	55.6	0.0
Total Delay	78.7	5.1	194.1	73.8	102.1	102.1	119.2
LOS	E	A	F	E	F	F	F
Approach Delay	65.4			86.3		110.0	
Approach LOS	E			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 87.3	Intersection LOS: F
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1405	310	182	1570	470	471	799
v/c Ratio	1.06	0.37	1.28	0.98	0.66	0.66	1.13
Control Delay	78.7	5.1	194.1	49.2	46.4	46.5	119.2
Queue Delay	0.0	0.0	0.0	24.6	55.7	55.6	0.0
Total Delay	78.7	5.1	194.1	73.8	102.1	102.1	119.2
Queue Length 50th (ft)	~948	45	~217	932	464	465	~1053
Queue Length 95th (ft)	#1094	m68	m#360	#1126	606	609	#1317
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	838	142	1609	717	717	706
Starvation Cap Reductn	0	0	0	128	0	0	0
Spillback Cap Reductn	0	0	0	0	329	329	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.37	1.28	1.06	1.21	1.21	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

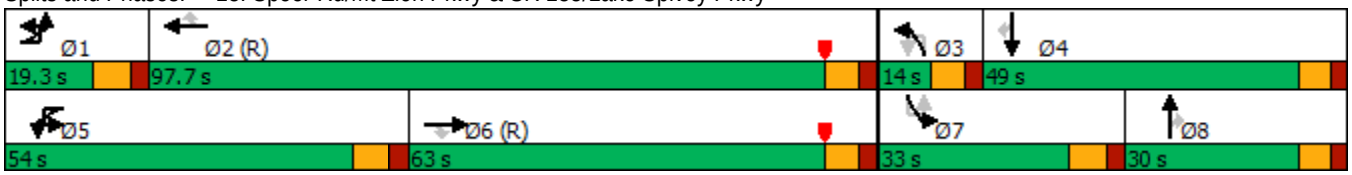
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

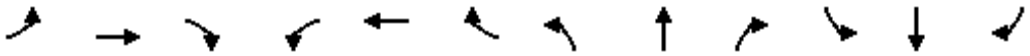
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	801	117	720	981	275	73	172	284	393	356	161
Future Volume (vph)	141	801	117	720	981	275	73	172	284	393	356	161
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	13.1	63.8	63.8	47.8	98.6	98.6	7.3	15.1	15.1	24.6	33.0	33.0
Actuated g/C Ratio	0.07	0.35	0.35	0.27	0.55	0.55	0.04	0.08	0.08	0.14	0.18	0.18
v/c Ratio	0.63	0.76	0.18	0.90	0.59	0.29	0.56	0.61	0.74	0.88	0.58	0.40
Control Delay	88.6	51.2	5.4	69.5	31.8	5.2	100.3	88.0	19.2	96.5	70.4	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.6	51.2	5.4	69.5	31.8	5.2	100.3	88.0	19.2	96.5	70.4	10.0
LOS	F	D	A	E	C	A	F	F	B	F	E	B
Approach Delay		51.4			42.6			52.8			71.0	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 51.6	Intersection LOS: D
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	157	843	123	818	1033	289	77	181	299	414	375	169
v/c Ratio	0.63	0.76	0.18	0.90	0.59	0.29	0.56	0.61	0.74	0.88	0.58	0.40
Control Delay	88.6	51.2	5.4	69.5	31.8	5.2	100.3	88.0	19.2	96.5	70.4	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.6	51.2	5.4	69.5	31.8	5.2	100.3	88.0	19.2	96.5	70.4	10.0
Queue Length 50th (ft)	90	406	12	492	394	29	46	111	3	250	215	0
Queue Length 95th (ft)	127	490	42	m480	m416	m27	79	152	106	#332	263	69
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	257	1103	689	934	1749	997	140	460	463	488	833	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.76	0.18	0.88	0.59	0.29	0.55	0.39	0.65	0.85	0.45	0.34

Intersection Summary

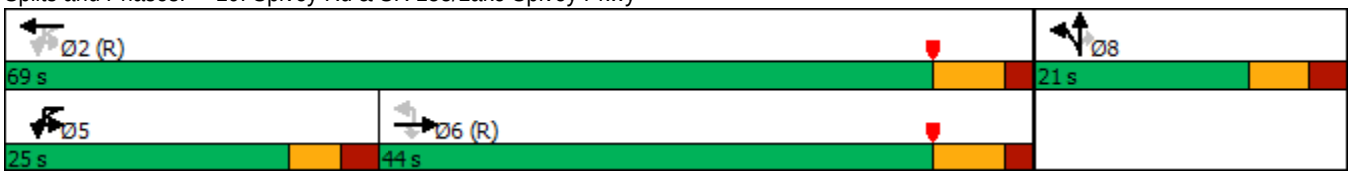
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

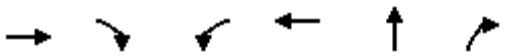
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBU	WBL	WBT	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	809	54	43	334	829	0	189
Future Volume (vph)	809	54	43	334	829	0	189
Turn Type	NA	Perm	pm+pt	pm+pt	NA	NA	Perm
Protected Phases	6		5	5	2	8	
Permitted Phases		6	2	2			8
Detector Phase	6	6	5	5	2	8	8
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	12.0	18.8	14.7	14.7
Total Split (s)	44.0	44.0	25.0	25.0	69.0	21.0	21.0
Total Split (%)	48.9%	48.9%	27.8%	27.8%	76.7%	23.3%	23.3%
Yellow Time (s)	4.8	4.8	3.5	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	47.9	47.9		68.3	67.5	9.0	9.0
Actuated g/C Ratio	0.53	0.53		0.76	0.75	0.10	0.10
v/c Ratio	0.52	0.06		0.72	0.37	0.11	0.59
Control Delay	16.3	0.1		26.7	3.2	37.3	13.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	16.3	0.1		26.7	3.2	37.3	13.2
LOS	B	A		C	A	D	B
Approach Delay	15.3				10.5	15.3	
Approach LOS	B				B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





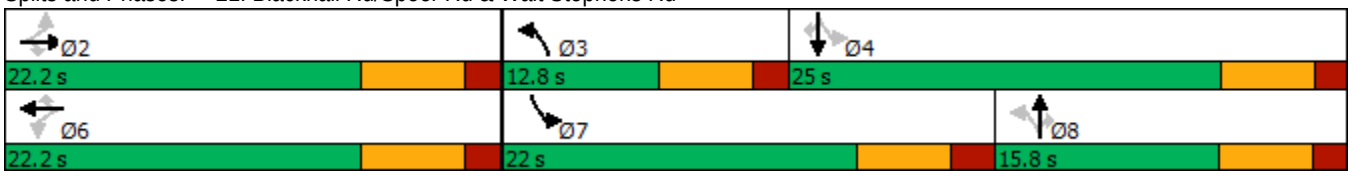
Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	852	57	397	873	19	199
v/c Ratio	0.52	0.06	0.72	0.37	0.11	0.59
Control Delay	16.3	0.1	26.7	3.2	37.3	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	0.1	26.7	3.2	37.3	13.2
Queue Length 50th (ft)	145	0	224	94	10	0
Queue Length 95th (ft)	267	1	302	134	30	60
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1654	897	634	2335	286	423
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.06	0.63	0.37	0.07	0.47

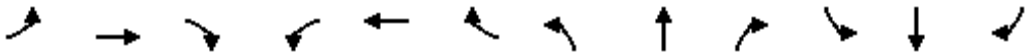
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	425	78	112	305	280	43	173	95	652	422	18
Future Volume (vph)	29	425	78	112	305	280	43	173	95	652	422	18
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	14.7	10.2	10.2	28.0	23.7	23.7
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.28	0.26	0.18	0.18	0.49	0.42	0.42
v/c Ratio	0.12	0.81	0.12	0.79	0.58	0.43	0.12	0.52	0.19	1.00	0.55	0.02
Control Delay	18.3	35.9	0.4	63.0	24.2	5.2	9.6	29.3	0.8	51.9	17.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	35.9	0.4	63.0	24.2	5.2	9.6	29.3	0.8	51.9	17.9	0.1
LOS	B	D	A	E	C	A	A	C	A	D	B	A
Approach Delay		29.7			22.8			17.9			38.0	
Approach LOS		C			C			B			D	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 56.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 29.9	Intersection LOS: C
Intersection Capacity Utilization 100.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	29	429	79	113	308	283	43	175	96	659	426	18
v/c Ratio	0.12	0.81	0.12	0.79	0.58	0.43	0.12	0.52	0.19	1.00	0.55	0.02
Control Delay	18.3	35.9	0.4	63.0	24.2	5.2	9.6	29.3	0.8	51.9	17.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	35.9	0.4	63.0	24.2	5.2	9.6	29.3	0.8	51.9	17.9	0.1
Queue Length 50th (ft)	8	147	0	38	97	0	7	59	0	164	84	0
Queue Length 95th (ft)	26	#292	0	#121	170	48	19	114	0	#359	#236	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	253	536	648	145	536	658	350	334	512	657	804	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.80	0.12	0.78	0.57	0.43	0.12	0.52	0.19	1.00	0.53	0.02

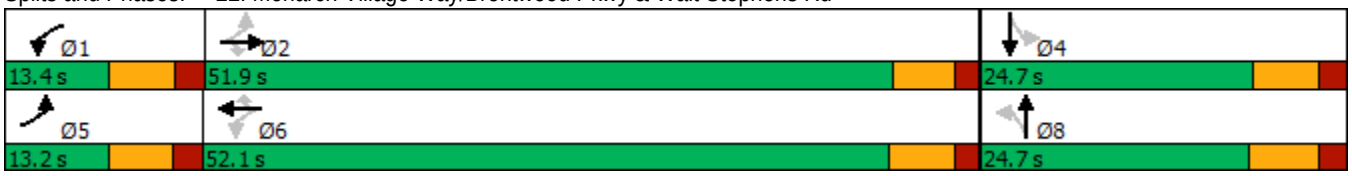
Intersection Summary

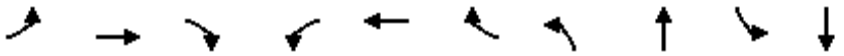
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	83	923	102	28	525	97	82	15	75	15
Future Volume (vph)	83	923	102	28	525	97	82	15	75	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	51.9	51.9	13.4	52.1	52.1	24.7	24.7	24.7	24.7
Total Split (%)	14.7%	57.7%	57.7%	14.9%	57.9%	57.9%	27.4%	27.4%	27.4%	27.4%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	47.3	47.1	47.1	44.5	41.4	41.4	11.8	11.8	12.1	12.1
Actuated g/C Ratio	0.68	0.67	0.67	0.64	0.59	0.59	0.17	0.17	0.17	0.17
v/c Ratio	0.15	0.73	0.09	0.08	0.48	0.10	0.37	0.18	0.33	0.24
Control Delay	5.2	18.2	1.9	5.2	14.1	1.7	35.5	15.6	34.1	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	18.2	1.9	5.2	14.1	1.7	35.5	15.6	34.1	13.4
LOS	A	B	A	A	B	A	D	B	C	B
Approach Delay		15.7			11.8			27.6		23.5
Approach LOS		B			B			C		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 69.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	932	103	28	530	98	83	55	76	79
v/c Ratio	0.15	0.73	0.09	0.08	0.48	0.10	0.37	0.18	0.33	0.24
Control Delay	5.2	18.2	1.9	5.2	14.1	1.7	35.5	15.6	34.1	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	18.2	1.9	5.2	14.1	1.7	35.5	15.6	34.1	13.4
Queue Length 50th (ft)	10	213	0	3	154	0	32	5	29	5
Queue Length 95th (ft)	28	#738	18	13	273	16	84	39	78	45
Internal Link Dist (ft)		2243			6582			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	575	1304	1145	330	1304	1145	357	479	370	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.71	0.09	0.08	0.41	0.09	0.23	0.11	0.21	0.16

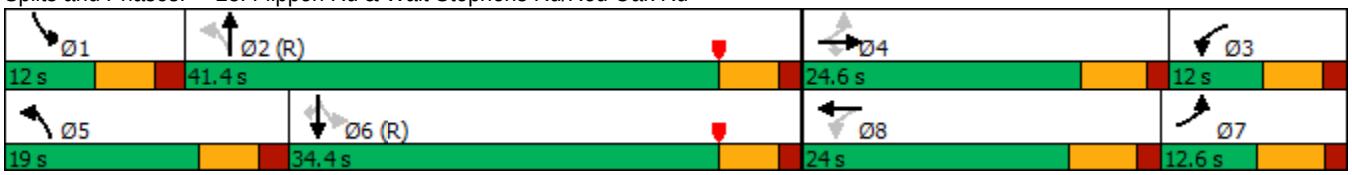
Intersection Summary

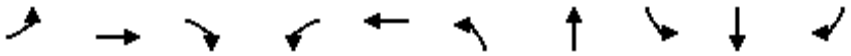
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	223	280	561	43	156	407	382	54	556	254
Future Volume (vph)	223	280	561	43	156	407	382	54	556	254
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	25.0	20.4	20.4	20.6	14.2	50.5	41.2	34.5	28.8	28.8
Actuated g/C Ratio	0.28	0.23	0.23	0.23	0.16	0.56	0.46	0.38	0.32	0.32
v/c Ratio	0.72	0.71	0.96	0.22	0.68	1.08	0.53	0.14	1.00	0.39
Control Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
LOS	D	D	D	C	D	F	B	B	E	A
Approach Delay		43.7			41.8		51.8		45.9	
Approach LOS		D			D		D		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 93.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	240	301	603	46	203	438	449	58	598	273
v/c Ratio	0.72	0.71	0.96	0.22	0.68	1.08	0.53	0.14	1.00	0.39
Control Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
Queue Length 50th (ft)	103	163	166	18	104	~247	188	15	336	0
Queue Length 95th (ft)	#190	#286	#396	41	169	m#421	m162	34	#557	53
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	339	425	628	208	372	404	845	412	601	697
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.71	0.96	0.22	0.55	1.08	0.53	0.14	1.00	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

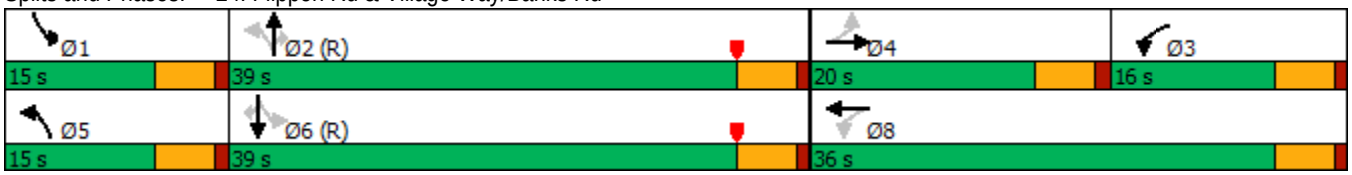
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	2	152	3	7	608	157	279	841	9
Future Volume (vph)	5	2	152	3	7	608	157	279	841	9
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	10.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	16.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	20.0	20.0	16.0	36.0	15.0	39.0	39.0	15.0	39.0	39.0
Total Split (%)	22.2%	22.2%	17.8%	40.0%	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	18.2	18.2	49.6	39.6	39.6	61.0	58.8	58.8
Actuated g/C Ratio		0.17	0.20	0.20	0.55	0.44	0.44	0.68	0.65	0.65
v/c Ratio		0.03	0.46	0.43	0.02	0.77	0.21	0.64	0.72	0.01
Control Delay		28.7	35.0	6.8	7.4	30.1	4.9	25.6	10.4	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	35.0	6.8	7.4	30.1	4.9	25.6	10.4	0.0
LOS		C	D	A	A	C	A	C	B	A
Approach Delay		28.7		18.9		24.7			14.1	
Approach LOS		C		B		C			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 78.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	158	210	7	633	164	291	876	9
v/c Ratio	0.03	0.46	0.43	0.02	0.77	0.21	0.64	0.72	0.01
Control Delay	28.7	35.0	6.8	7.4	30.1	4.9	25.6	10.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	35.0	6.8	7.4	30.1	4.9	25.6	10.4	0.0
Queue Length 50th (ft)	3	83	2	1	286	6	79	40	0
Queue Length 95th (ft)	17	114	48	8	#539	46	m105	m#647	m0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	308	351	693	349	827	791	452	1217	1105
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.45	0.30	0.02	0.77	0.21	0.64	0.72	0.01

Intersection Summary

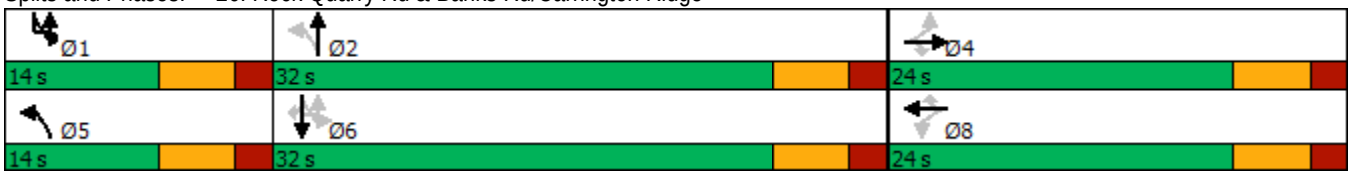
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBU	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	25	317	24	15	8	256	646	100	14	700	91
Future Volume (vph)	79	25	317	24	15	8	256	646	100	14	700	91
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	1	6	
Permitted Phases	4		4	8		8	2		6	6		6
Detector Phase	4	4	4	8	8	8	5	2	1	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	32.0	14.0	14.0	32.0	32.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	20.0%	45.7%	20.0%	20.0%	45.7%	45.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	Min
Act Effct Green (s)		10.9	10.9		10.9	10.9	31.6	25.4		28.2	21.3	21.3
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.54	0.43		0.48	0.36	0.36
v/c Ratio		0.41	0.59		0.15	0.02	0.59	0.46		0.27	0.56	0.14
Control Delay		27.2	8.4		22.3	0.1	12.8	14.4		7.4	16.9	1.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		27.2	8.4		22.3	0.1	12.8	14.4		7.4	16.9	1.7
LOS		C	A		C	A	B	B		A	B	A
Approach Delay		13.0			18.7			14.0			14.1	
Approach LOS		B			B			B			B	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 58.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	330	41	8	267	706	126	729	95
v/c Ratio	0.41	0.59	0.15	0.02	0.59	0.46	0.27	0.56	0.14
Control Delay	27.2	8.4	22.3	0.1	12.8	14.4	7.4	16.9	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	8.4	22.3	0.1	12.8	14.4	7.4	16.9	1.7
Queue Length 50th (ft)	34	4	12	0	35	90	15	100	0
Queue Length 95th (ft)	78	62	36	0	#89	165	42	172	13
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	439	724	455	601	457	1632	512	1615	806
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.46	0.09	0.01	0.58	0.43	0.25	0.45	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	599	368	463	1014	434	328
Future Volume (veh/h)	599	368	463	1014	434	328
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	651	400	503	1102	472	357
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	990	442	513	1978	618	499
Arrive On Green	0.34	0.34	0.24	0.64	0.22	0.22
Sat Flow, veh/h	3011	1309	1555	3185	2826	2281
Grp Volume(v), veh/h	651	400	503	1102	472	357
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1413	1141
Q Serve(g_s), s	18.9	29.2	22.9	20.0	15.7	14.5
Cycle Q Clear(g_c), s	18.9	29.2	22.9	20.0	15.7	14.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	990	442	513	1978	618	499
V/C Ratio(X)	0.66	0.91	0.98	0.56	0.76	0.72
Avail Cap(c_a), veh/h	990	442	513	1978	901	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	31.6	22.1	10.2	36.6	36.2
Incr Delay (d2), s/veh	3.4	24.8	34.4	1.1	3.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	11.3	12.1	5.9	5.3	9.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.6	56.4	56.5	11.3	39.8	38.9
LnGrp LOS	C	E	E	B	D	D
Approach Vol, veh/h	1051			1605	829	
Approach Delay, s/veh	41.0			25.5	39.4	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.0		29.0	30.0	41.0
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		22.0		17.7	24.9	31.2
Green Ext Time (p_c), s		16.3		4.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	748	78	18	1302	207	71	33	57	279	6	137
Future Volume (veh/h)	191	748	78	18	1302	207	71	33	57	279	6	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1648	1870	1870	1870	1648	1870	1870
Adj Flow Rate, veh/h	199	779	81	19	1356	216	74	34	59	291	6	143
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	17	2	2	2	17	2	2
Cap, veh/h	182	1550	161	325	1295	610	195	94	130	364	19	452
Arrive On Green	0.07	0.57	0.57	0.14	0.14	0.14	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1570	2734	284	643	2962	1397	484	319	439	1148	64	1531
Grp Volume(v), veh/h	199	426	434	19	1356	216	167	0	0	291	0	149
Grp Sat Flow(s),veh/h/ln	1570	1495	1523	643	1481	1397	1243	0	0	1148	0	1595
Q Serve(g_s), s	7.0	17.2	17.3	2.6	43.7	13.9	6.7	0.0	0.0	15.4	0.0	7.3
Cycle Q Clear(g_c), s	7.0	17.2	17.3	6.9	43.7	13.9	13.9	0.0	0.0	29.4	0.0	7.3
Prop In Lane	1.00		0.19	1.00		1.00	0.44		0.35	1.00		0.96
Lane Grp Cap(c), veh/h	182	848	863	325	1295	610	419	0	0	364	0	470
V/C Ratio(X)	1.09	0.50	0.50	0.06	1.05	0.35	0.40	0.00	0.00	0.80	0.00	0.32
Avail Cap(c_a), veh/h	182	848	863	325	1295	610	419	0	0	364	0	470
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.82	0.82	0.82	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	13.1	13.1	28.9	42.8	30.1	30.4	0.0	0.0	36.4	0.0	27.4
Incr Delay (d2), s/veh	86.0	1.6	1.6	0.3	36.2	1.3	0.6	0.0	0.0	11.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	5.7	5.8	0.4	23.7	5.4	3.5	0.0	0.0	8.1	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.4	14.7	14.7	29.2	79.0	31.4	31.0	0.0	0.0	48.3	0.0	27.8
LnGrp LOS	F	B	B	C	F	C	C	A	A	D	A	C
Approach Vol, veh/h		1059			1591			167			440	
Approach Delay, s/veh		33.1			71.9			31.0			41.4	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.0	50.8		36.2		63.8		36.2				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	7.0	43.7		29.5		56.7		29.5				
Max Q Clear Time (g_c+I1), s	9.0	45.7		31.4		19.3		15.9				
Green Ext Time (p_c), s	0.0	0.0		0.0		13.0		0.8				

Intersection Summary		
HCM 6th Ctrl Delay	53.1	
HCM 6th LOS	D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	856	110	188	1509	7	230	16	191	27	46	20
Future Volume (veh/h)	5	856	110	188	1509	7	230	16	191	27	46	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	901	116	198	1588	7	242	17	201	28	48	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	134	1529	682	366	1809	8	352	379	321	115	185	70
Arrive On Green	0.01	0.53	0.53	0.07	0.59	0.59	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	2906	1296	1753	3053	13	1332	1870	1585	340	915	347
Grp Volume(v), veh/h	5	901	116	198	777	818	242	17	201	97	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1296	1753	1495	1572	1332	1870	1585	1601	0	0
Q Serve(g_s), s	0.1	21.3	4.7	4.9	44.1	44.2	12.3	0.7	11.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	21.3	4.7	4.9	44.1	44.2	16.8	0.7	11.6	4.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.29		0.22
Lane Grp Cap(c), veh/h	134	1529	682	366	886	931	352	379	321	371	0	0
V/C Ratio(X)	0.04	0.59	0.17	0.54	0.88	0.88	0.69	0.04	0.63	0.26	0.00	0.00
Avail Cap(c_a), veh/h	234	1529	682	418	886	931	399	445	377	425	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.0	16.3	12.3	12.5	17.3	17.3	38.3	32.1	36.4	33.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.7	0.5	0.1	1.3	1.2	6.3	0.1	4.5	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.6	1.3	1.7	13.6	14.3	6.2	0.3	4.8	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	17.9	12.9	12.7	18.6	18.5	44.5	32.2	41.0	34.4	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	D	C	D	C	A	A
Approach Vol, veh/h		1022			1793			460			97	
Approach Delay, s/veh		17.4			17.9			42.5			34.4	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	66.0		27.7	13.0	59.3		27.7				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	46.2		6.5	6.9	23.3		18.8				
Green Ext Time (p_c), s	0.0	3.7		0.7	0.2	11.8		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		21.6
HCM 6th LOS		C

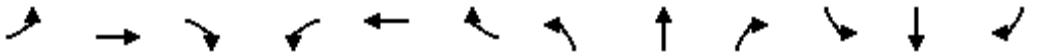
Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	3	77	12	3	16	99	1562	25	9	756	29
Future Vol, veh/h	30	3	77	12	3	16	99	1562	25	9	756	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	32	3	81	13	3	17	104	1644	26	9	796	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1846	2692	398	2270	2697	822	827	0	0	1670	0	0
Stage 1	814	814	-	1852	1852	-	-	-	-	-	-	-
Stage 2	1032	1878	-	418	845	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	46	21	601	22	21	317	800	-	-	381	-	-
Stage 1	338	390	-	77	123	-	-	-	-	-	-	-
Stage 2	249	119	-	583	377	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	18	601	15	18	317	800	-	-	381	-	-
Mov Cap-2 Maneuver	33	18	-	15	18	-	-	-	-	-	-	-
Stage 1	294	381	-	67	107	-	-	-	-	-	-	-
Stage 2	199	104	-	488	368	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	125.9	271.6	0.6	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	800	-	-	31	601	16	317	381	-	-
HCM Lane V/C Ratio	0.13	-	-	1.121	0.135	0.987	0.053	0.025	-	-
HCM Control Delay (s)	10.2	-	-	$ 391.8	11.9	$ 543.2	17	14.7	-	-
HCM Lane LOS	B	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.9	0.5	2.4	0.2	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	78	475	41	62	51	900	620	45	25	286	190
Future Volume (veh/h)	106	78	475	41	62	51	900	620	45	25	286	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	110	81	495	43	65	53	938	646	47	26	298	198
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	216	173	1067	183	148	126	1041	1794	978	50	902	425
Arrive On Green	0.02	0.03	0.03	0.05	0.08	0.08	0.34	0.62	0.62	0.03	0.30	0.30
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	110	81	495	43	65	53	938	646	47	26	298	198
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	8.3	5.5	12.0	2.8	4.3	4.1	38.1	14.2	1.5	1.9	10.1	14.9
Cycle Q Clear(g_c), s	8.3	5.5	12.0	2.8	4.3	4.1	38.1	14.2	1.5	1.9	10.1	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	173	1067	183	148	126	1041	1794	978	50	902	425
V/C Ratio(X)	0.51	0.47	0.46	0.23	0.44	0.42	0.90	0.36	0.05	0.52	0.33	0.47
Avail Cap(c_a), veh/h	216	173	1067	207	158	134	1316	1794	978	84	902	425
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	59.9	27.4	50.7	57.1	57.0	40.7	12.2	9.8	62.3	35.0	36.7
Incr Delay (d2), s/veh	1.9	2.3	0.4	0.8	2.4	2.7	7.7	0.6	0.1	21.1	1.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.8	5.5	1.3	2.2	1.7	14.8	4.4	0.5	1.1	3.7	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	62.2	27.8	51.5	59.5	59.7	48.4	12.8	9.9	83.4	36.0	40.3
LnGrp LOS	E	E	C	D	E	E	D	B	A	F	D	D
Approach Vol, veh/h		686			161			1631			522	
Approach Delay, s/veh		36.3			57.4			33.2			40.0	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	87.1	15.0	17.3	51.2	46.5	13.3	19.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	6.1	77.1	9.0	11.0	56.2	27.1	8.0	* 12
Max Q Clear Time (g_c+I1), s	3.9	16.2	10.3	6.3	40.1	16.9	4.8	14.0
Green Ext Time (p_c), s	0.0	10.5	0.0	0.2	4.3	3.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	833	213	15	1293	53	271	11	15	20	12	95
Future Volume (veh/h)	76	833	213	15	1293	53	271	11	15	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	877	0	16	1361	56	285	12	16	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	353	1723		458	1667	918	358	176	234	372	452	383
Arrive On Green	0.09	1.00	0.00	0.04	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	1280	727	969	1382	1870	1585
Grp Volume(v), veh/h	80	877	0	16	1361	56	285	0	28	21	13	100
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1280	0	1696	1382	1870	1585
Q Serve(g_s), s	2.3	0.0	0.0	0.5	0.0	0.0	28.4	0.0	1.7	1.5	0.7	6.6
Cycle Q Clear(g_c), s	2.3	0.0	0.0	0.5	0.0	0.0	29.1	0.0	1.7	3.2	0.7	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	353	1723		458	1667	918	358	0	410	372	452	383
V/C Ratio(X)	0.23	0.51		0.03	0.82	0.06	0.80	0.00	0.07	0.06	0.03	0.26
Avail Cap(c_a), veh/h	371	1723		511	1667	918	380	0	440	399	489	415
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.75	0.75	0.75	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.2	0.0	0.0	10.3	0.0	0.0	48.8	0.0	38.0	39.2	37.6	39.9
Incr Delay (d2), s/veh	0.3	0.9	0.0	0.0	2.8	0.0	10.7	0.0	0.1	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.0	0.2	0.6	0.0	10.2	0.0	0.7	0.5	0.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	0.9	0.0	10.3	2.8	0.0	59.5	0.0	38.1	39.3	37.7	40.3
LnGrp LOS	A	A		B	A	A	E	A	D	D	D	D
Approach Vol, veh/h		957	A		1433			313			134	
Approach Delay, s/veh		1.7			2.8			57.5			39.9	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	84.1		37.7	10.7	81.6		37.7
Change Period (Y+Rc), s	5.5	* 6.3		* 6.3	5.0	* 6.3		* 6.3
Max Green Setting (Gmax), s	6.5	* 72		* 34	7.0	* 72		* 34
Max Q Clear Time (g_c+I1), s	2.5	2.0		8.6	4.3	2.0		31.1
Green Ext Time (p_c), s	0.0	15.6		0.4	0.0	33.3		0.3

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1356	74	135	1248	0	0	0	0	194	0	536
Future Volume (veh/h)	0	1356	74	135	1248	0	0	0	0	194	0	536
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1870	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1490	81	148	1371	0				213	0	589
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	2	2	26	0				2	2	2
Cap, veh/h	0	2495	956	334	1999	0				748	0	666
Arrive On Green	0.00	1.00	1.00	0.03	0.47	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1585	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1490	81	148	1371	0				213	0	589
Grp Sat Flow(s),veh/h/ln	0	1378	1585	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.9	48.6	0.0				6.5	0.0	23.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.9	48.6	0.0				6.5	0.0	23.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2495	956	334	1999	0				748	0	666
V/C Ratio(X)	0.00	0.60	0.08	0.44	0.69	0.00				0.28	0.00	0.88
Avail Cap(c_a), veh/h	0	2495	956	364	1999	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.76	0.76	0.13	0.13	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.1	23.6	0.0				43.1	0.0	49.8
Incr Delay (d2), s/veh	0.0	0.8	0.1	0.0	0.3	0.0				0.2	0.0	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	1.4	17.1	0.0				2.9	0.0	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.8	0.1	8.2	23.9	0.0				43.4	0.0	61.6
LnGrp LOS	A	A	A	A	C	A				D	A	E
Approach Vol, veh/h		1571			1519						802	
Approach Delay, s/veh		0.8			22.3						56.7	
Approach LOS		A			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	84.3		33.8		96.2
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	15.9	2.0		25.4		50.6
Green Ext Time (p_c), s	0.0	36.7		1.9		22.9

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



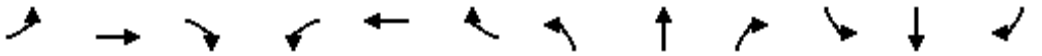
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	680	1195	0	0	1047	761	304	0	216	0	0	0
Future Volume (veh/h)	680	1195	0	0	1047	761	304	0	216	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	747	1313	0	0	1151	0	334	0	237			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	654	2382	0	0	1209		590	0	263			
Arrive On Green	0.21	0.49	0.00	0.00	0.75	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	3563	0	1585			
Grp Volume(v), veh/h	747	1313	0	0	1151	0	334	0	237			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	36.7	0.0	0.0	40.4	0.0	11.2	0.0	19.1			
Cycle Q Clear(g_c), s	41.5	36.7	0.0	0.0	40.4	0.0	11.2	0.0	19.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	654	2382	0	0	1209		590	0	263			
V/C Ratio(X)	1.14	0.55	0.00	0.00	0.95		0.57	0.00	0.90			
Avail Cap(c_a), veh/h	654	2382	0	0	1209		682	0	304			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.46	0.46	0.00	0.00	0.38	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	43.2	18.1	0.0	0.0	15.5	0.0	49.9	0.0	53.2			
Incr Delay (d2), s/veh	72.7	0.4	0.0	0.0	8.1	0.0	0.3	0.0	24.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	34.8	14.5	0.0	0.0	6.6	0.0	4.8	0.0	9.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.9	18.5	0.0	0.0	23.6	0.0	50.2	0.0	77.5			
LnGrp LOS	F	B	A	A	C		D	A	E			
Approach Vol, veh/h		2060			1151	A		571				
Approach Delay, s/veh		53.8			23.6			61.6				
Approach LOS		D			C			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		102.4			47.0	55.4		27.6				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		38.7			43.5	42.4		21.1				
Green Ext Time (p_c), s		26.6			0.0	2.2		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1499	323	117	1185	0	0	0	0	391	0	266
Future Volume (veh/h)	0	1499	323	117	1185	0	0	0	0	391	0	266
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1666	359	130	1317	0				434	0	296
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2162	1057	277	2455	0				523	0	466
Arrive On Green	0.00	1.00	1.00	0.06	1.00	0.00				0.15	0.00	0.15
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	3170
Grp Volume(v), veh/h	0	1666	359	130	1317	0				434	0	296
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0				15.4	0.0	11.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.8	0.0	0.0				15.4	0.0	11.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2162	1057	277	2455	0				523	0	466
V/C Ratio(X)	0.00	0.77	0.34	0.47	0.54	0.00				0.83	0.00	0.64
Avail Cap(c_a), veh/h	0	2162	1057	321	2455	0				680	0	605
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.24	0.24	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.2	0.0	0.0				53.9	0.0	52.2
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.1	0.1	0.0				6.7	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.1	0.9	0.0	0.0				7.1	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.7	0.2	5.3	0.1	0.0				60.5	0.0	53.6
LnGrp LOS	A	A	A	A	A	A				E	A	D
Approach Vol, veh/h		2025			1447						730	
Approach Delay, s/veh		0.6			0.5						57.7	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	93.0		25.3		104.7
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	4.8	2.0		17.4		2.0
Green Ext Time (p_c), s	0.1	53.6		1.7		32.6

Intersection Summary		
HCM 6th Ctrl Delay		10.5
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	79	881	73	51	245	953	138	69	191	702	143	82	66
Future Volume (veh/h)	79	881	73	51	245	953	138	69	191	702	143	82	66
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870		1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	968	80		269	1047	152	76	210	771	157	90	73
Peak Hour Factor	0.91	0.91	0.91		0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2		2	13	2	2	2	2	2	2	2
Cap, veh/h	153	1066	535		308	1241	606	149	1083	850	167	1116	498
Arrive On Green	0.09	0.67	0.67		0.18	0.77	0.77	0.04	0.30	0.30	0.05	0.31	0.31
Sat Flow, veh/h	3456	3159	1585		3456	3244	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	87	968	80		269	1047	152	76	210	771	157	90	73
Grp Sat Flow(s),veh/h/ln	1728	1580	1585		1728	1622	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	3.1	33.4	2.4		9.8	27.8	3.6	2.8	5.7	34.5	5.9	2.3	4.3
Cycle Q Clear(g_c), s	3.1	33.4	2.4		9.8	27.8	3.6	2.8	5.7	34.5	5.9	2.3	4.3
Prop In Lane	1.00		1.00		1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	1066	535		308	1241	606	149	1083	850	167	1116	498
V/C Ratio(X)	0.57	0.91	0.15		0.87	0.84	0.25	0.51	0.19	0.91	0.94	0.08	0.15
Avail Cap(c_a), veh/h	162	1066	535		308	1241	606	159	1241	974	167	1263	563
HCM Platoon Ratio	2.00	2.00	2.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78		0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	19.4	14.4		52.7	12.7	9.9	60.8	33.4	43.4	61.7	31.4	32.1
Incr Delay (d2), s/veh	3.3	10.4	0.5		18.2	5.5	0.7	2.7	0.1	11.0	51.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	7.3	0.9		4.6	5.2	1.2	1.3	2.4	12.8	3.7	1.0	1.6
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	61.4	29.8	14.8		70.9	18.1	10.6	63.5	33.5	54.4	113.1	31.4	32.2
LnGrp LOS	E	C	B		E	B	B	E	C	D	F	C	C
Approach Vol, veh/h		1135				1468			1057			320	
Approach Delay, s/veh		31.2				27.0			50.9			71.7	
Approach LOS		C				C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	56.8	12.5	47.4	19.1	51.0	13.7	46.2
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.1	29.8	4.8	6.3	11.8	35.4	7.9	36.5
Green Ext Time (p_c), s	0.0	9.5	0.0	0.8	0.0	2.1	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	47.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	301	341	99	77	94
Future Vol, veh/h	200	301	341	99	77	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	328	493	559	162	126	154

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	721	0	-	0	1708	559			
Stage 1	-	-	-	-	559	-			
Stage 2	-	-	-	-	1149	-			
Critical Hdwy	4.13	-	-	-	6.45	6.25			
Critical Hdwy Stg 1	-	-	-	-	5.45	-			
Critical Hdwy Stg 2	-	-	-	-	5.45	-			
Follow-up Hdwy	2.227	-	-	-	3.545	3.345			
Pot Cap-1 Maneuver	876	-	-	-	~ 98	523			
Stage 1	-	-	-	-	567	-			
Stage 2	-	-	-	-	298	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	876	-	-	-	~ 61	523			
Mov Cap-2 Maneuver	-	-	-	-	~ 61	-			
Stage 1	-	-	-	-	355	-			
Stage 2	-	-	-	-	298	-			

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	296.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	876	-	-	-	61	523
HCM Lane V/C Ratio	0.374	-	-	-	2.069	0.295
HCM Control Delay (s)	11.5	-	-	-	$ 640.5	14.7
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	1.8	-	-	-	12.1	1.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	244	52	107	290	567	46	355	90	187	74	15
Future Volume (veh/h)	30	244	52	107	290	567	46	355	90	187	74	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	274	58	120	326	637	52	399	101	210	83	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	220	574	487	323	570	850	575	469	397	382	576	488
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.25	0.25	0.12	0.31	0.31
Sat Flow, veh/h	583	1870	1585	1040	1856	2768	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	34	274	58	120	326	637	52	399	101	210	83	17
Grp Sat Flow(s),veh/h/ln	583	1870	1585	1040	1856	1384	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.9	6.7	1.5	6.0	8.4	11.7	1.2	11.5	2.9	4.8	1.8	0.4
Cycle Q Clear(g_c), s	11.3	6.7	1.5	12.7	8.4	11.7	1.2	11.5	2.9	4.8	1.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	574	487	323	570	850	575	469	397	382	576	488
V/C Ratio(X)	0.15	0.48	0.12	0.37	0.57	0.75	0.09	0.85	0.25	0.55	0.14	0.03
Avail Cap(c_a), veh/h	232	611	518	343	606	904	672	535	453	390	576	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	15.9	14.1	21.1	16.5	17.7	13.5	20.2	17.0	14.3	14.2	13.7
Incr Delay (d2), s/veh	0.7	1.3	0.2	1.5	2.1	4.2	0.1	11.3	0.3	1.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	0.5	1.4	3.2	3.5	0.4	5.6	0.9	1.7	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	17.2	14.3	22.6	18.6	21.8	13.6	31.5	17.3	15.8	14.3	13.7
LnGrp LOS	C	B	B	C	B	C	B	C	B	B	B	B
Approach Vol, veh/h		366			1083			552			310	
Approach Delay, s/veh		17.2			20.9			27.2			15.3	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	23.7	9.7	23.2	23.7	12.9	20.0
Change Period (Y+Rc), s	* 6.3	* 5.8	* 5.8	* 6.3	6.2	* 5.8
Max Green Setting (Gmax), s	* 19	* 7	* 17	* 19	7.0	* 16
Max Q Clear Time (g_c+I1), s	13.3	3.2	3.8	14.7	6.8	13.5
Green Ext Time (p_c), s	1.4	0.0	0.3	2.7	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	157	410	20	171	26	302	345	16	21	272	172
Future Volume (veh/h)	202	157	410	20	171	26	302	345	16	21	272	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	224	174	0	22	190	29	336	383	18	23	302	191
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	369	461		363	251	38	388	547	26	287	417	353
Arrive On Green	0.11	0.25	0.00	0.03	0.16	0.16	0.11	0.31	0.31	0.03	0.23	0.23
Sat Flow, veh/h	1781	1870	1585	1767	1572	240	1781	1772	83	1753	1841	1560
Grp Volume(v), veh/h	224	174	0	22	0	219	336	0	401	23	302	191
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1812	1781	0	1855	1753	1841	1560
Q Serve(g_s), s	6.3	4.7	0.0	0.6	0.0	7.1	7.0	0.0	11.7	0.6	9.3	6.6
Cycle Q Clear(g_c), s	6.3	4.7	0.0	0.6	0.0	7.1	7.0	0.0	11.7	0.6	9.3	6.6
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	369	461		363	0	289	388	0	573	287	417	353
V/C Ratio(X)	0.61	0.38		0.06	0.00	0.76	0.87	0.00	0.70	0.08	0.72	0.54
Avail Cap(c_a), veh/h	369	579		487	0	528	388	0	616	403	582	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	19.2	0.0	20.4	0.0	24.7	19.1	0.0	18.7	17.5	22.0	20.9
Incr Delay (d2), s/veh	2.9	0.5	0.0	0.1	0.0	4.0	18.3	0.0	4.4	0.1	5.3	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.8	0.0	0.2	0.0	3.1	5.0	0.0	4.9	0.2	4.1	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	19.7	0.0	20.5	0.0	28.7	37.4	0.0	23.2	17.6	27.2	23.7
LnGrp LOS	C	B		C	A	C	D	A	C	B	C	C
Approach Vol, veh/h		398	A		241			737			516	
Approach Delay, s/veh		20.5			28.0			29.6			25.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	24.6	7.7	21.2	13.0	19.5	13.0	15.9
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.6	13.7	2.6	6.7	9.0	11.3	8.3	9.1
Green Ext Time (p_c), s	0.0	2.0	0.0	0.6	0.0	2.6	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Notes

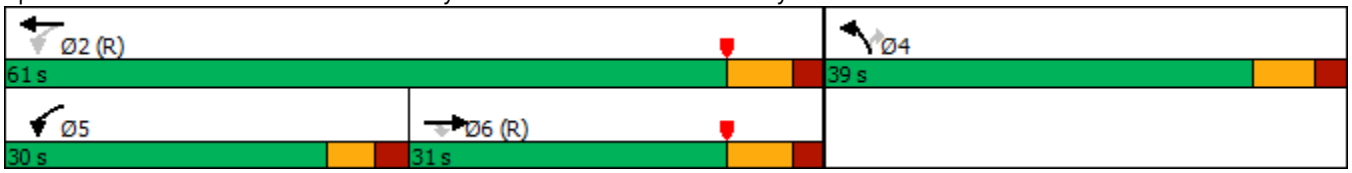
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	599	368	463	1014	434	328
Future Volume (vph)	599	368	463	1014	434	328
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	23.7	23.7	62.6	61.4	24.2	24.2
Actuated g/C Ratio	0.24	0.24	0.63	0.61	0.24	0.24
v/c Ratio	0.94	0.65	0.88	0.59	0.70	0.44
Control Delay	61.6	9.0	40.8	14.1	39.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	9.0	40.8	14.1	39.8	4.7
LOS	E	A	D	B	D	A
Approach Delay	41.6			22.5	24.7	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 71.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	651	400	503	1102	472	357
v/c Ratio	0.94	0.65	0.88	0.59	0.70	0.44
Control Delay	61.6	9.0	40.8	14.1	39.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	9.0	40.8	14.1	39.8	4.7
Queue Length 50th (ft)	215	0	235	207	141	0
Queue Length 95th (ft)	#328	86	#499	318	178	35
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	689	613	572	1878	893	968
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.65	0.88	0.59	0.53	0.37

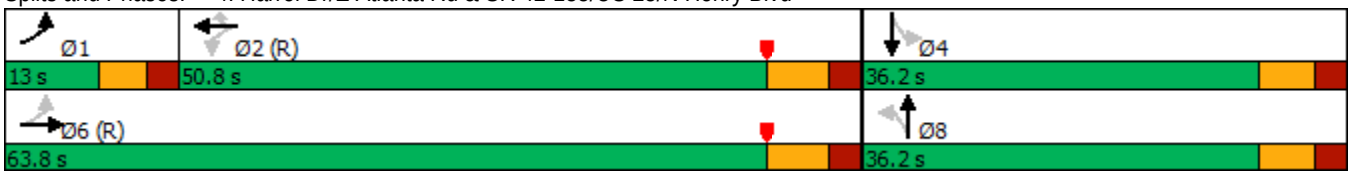
Intersection Summary

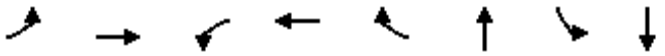
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	191	748	18	1302	207	71	33	279	6
Future Volume (vph)	191	748	18	1302	207	71	33	279	6
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		2			8		4
Permitted Phases	6		2		2	8		4	
Detector Phase	1	6	2	2	2	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	13.0	63.8	50.8	50.8	50.8	36.2	36.2	36.2	36.2
Total Split (%)	13.0%	63.8%	50.8%	50.8%	50.8%	36.2%	36.2%	36.2%	36.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1		6.7	6.7	6.7
Lead/Lag	Lead		Lag	Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	58.4	57.3	43.7	43.7	43.7		28.9	28.9	28.9
Actuated g/C Ratio	0.58	0.57	0.44	0.44	0.44		0.29	0.29	0.29
v/c Ratio	1.09	0.50	0.07	1.06	0.30		0.39	0.96	0.30
Control Delay	106.0	12.8	22.2	67.3	6.8		26.5	79.7	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	106.0	12.8	22.2	67.3	6.8		26.5	79.7	6.8
LOS	F	B	C	E	A		C	E	A
Approach Delay		30.3		58.5			26.5		55.0
Approach LOS		C		E			C		E

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 47.2	Intersection LOS: D
Intersection Capacity Utilization 93.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	199	860	19	1356	216	167	291	149
v/c Ratio	1.09	0.50	0.07	1.06	0.30	0.39	0.96	0.30
Control Delay	106.0	12.8	22.2	67.3	6.8	26.5	79.7	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.0	12.8	22.2	67.3	6.8	26.5	79.7	6.8
Queue Length 50th (ft)	~95	246	6	~487	1	69	180	3
Queue Length 95th (ft)	#238	301	m16	#626	76	130	#345	48
Internal Link Dist (ft)		3939		643		194		367
Turn Bay Length (ft)	150		100					
Base Capacity (vph)	183	1705	267	1282	722	434	309	512
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.50	0.07	1.06	0.30	0.38	0.94	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

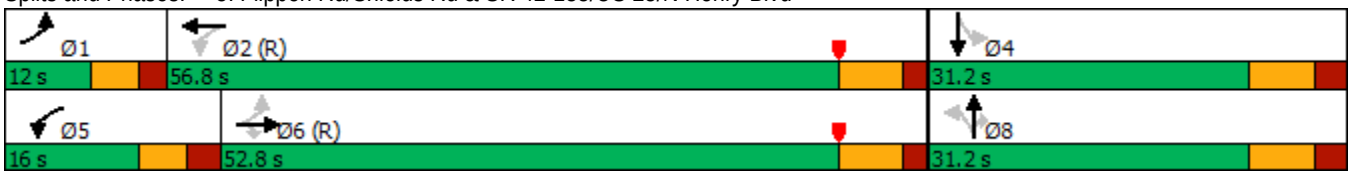
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

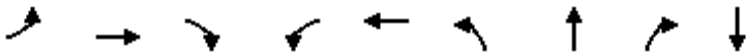
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	856	110	188	1509	230	16	191	27	46
Future Volume (vph)	5	856	110	188	1509	230	16	191	27	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6	2		8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	56.1	49.0	49.0	64.5	61.8	21.8	21.8	21.8		21.8
Actuated g/C Ratio	0.56	0.49	0.49	0.64	0.62	0.22	0.22	0.22		0.22
v/c Ratio	0.03	0.64	0.17	0.53	0.87	0.79	0.04	0.40		0.26
Control Delay	7.6	22.3	3.6	8.1	12.8	56.1	29.9	7.1		29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	7.6	22.3	3.6	8.1	12.8	56.1	29.9	7.1		29.1
LOS	A	C	A	A	B	E	C	A		C
Approach Delay		20.1			12.3		33.7			29.1
Approach LOS		C			B		C			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 82.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	5	901	116	198	1595	242	17	201	97
v/c Ratio	0.03	0.64	0.17	0.53	0.87	0.79	0.04	0.40	0.26
Control Delay	7.6	22.3	3.6	8.1	12.8	56.1	29.9	7.1	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	22.3	3.6	8.1	12.8	56.1	29.9	7.1	29.1
Queue Length 50th (ft)	1	229	0	10	544	143	8	0	43
Queue Length 95th (ft)	5	301	30	m11	m#598	#252	26	55	88
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	193	1414	692	387	1827	334	443	529	402
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.64	0.17	0.51	0.87	0.72	0.04	0.38	0.24

Intersection Summary

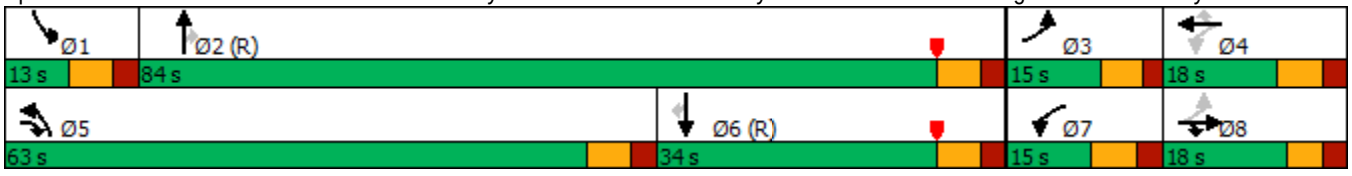
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

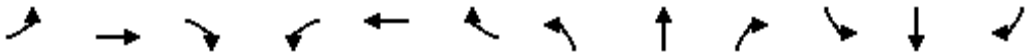
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	78	475	41	62	51	900	620	45	25	286	190
Future Volume (vph)	106	78	475	41	62	51	900	620	45	25	286	190
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	15.0	18.0		15.0	18.0	18.0	63.0	84.0	84.0	13.0	34.0	34.0
Total Split (%)	11.5%	13.8%		11.5%	13.8%	13.8%	48.5%	64.6%	64.6%	10.0%	26.2%	26.2%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	25.9	16.8	73.0	19.2	12.4	12.4	49.4	80.1	80.1	6.8	31.7	31.7
Actuated g/C Ratio	0.20	0.13	0.56	0.15	0.10	0.10	0.38	0.62	0.62	0.05	0.24	0.24
v/c Ratio	0.47	0.34	0.36	0.19	0.37	0.16	0.82	0.36	0.05	0.28	0.42	0.40
Control Delay	32.8	39.9	24.8	42.6	61.6	1.0	42.8	14.2	0.1	67.8	45.6	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	39.9	24.8	42.6	61.6	1.0	42.8	14.2	0.1	67.8	45.6	7.6
LOS	C	D	C	D	E	A	D	B	A	E	D	A
Approach Delay		27.9			36.6			30.3			32.3	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





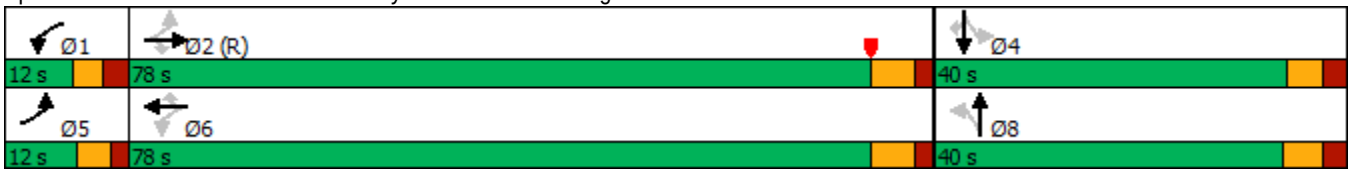
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	110	81	495	43	65	53	938	646	47	26	298	198
v/c Ratio	0.47	0.34	0.36	0.19	0.37	0.16	0.82	0.36	0.05	0.28	0.42	0.40
Control Delay	32.8	39.9	24.8	42.6	61.6	1.0	42.8	14.2	0.1	67.8	45.6	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	39.9	24.8	42.6	61.6	1.0	42.8	14.2	0.1	67.8	45.6	7.6
Queue Length 50th (ft)	78	64	165	28	51	0	362	164	0	22	118	0
Queue Length 95th (ft)	96	110	292	65	102	0	411	183	0	54	165	58
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	234	240	1491	222	185	343	1293	1828	1056	93	726	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.34	0.33	0.19	0.35	0.15	0.73	0.35	0.04	0.28	0.41	0.40

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	833	213	15	1293	53	271	11	20	12	95
Future Volume (vph)	76	833	213	15	1293	53	271	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	78.0	78.0	12.0	78.0	78.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	9.2%	60.0%	60.0%	9.2%	60.0%	60.0%	30.8%	30.8%	30.8%	30.8%	30.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	86.7	82.6	82.6	82.5	75.5	75.5	30.0	30.0	30.3	30.3	30.3
Actuated g/C Ratio	0.67	0.64	0.64	0.63	0.58	0.58	0.23	0.23	0.23	0.23	0.23
v/c Ratio	0.36	0.48	0.21	0.04	0.82	0.06	0.89	0.07	0.07	0.03	0.22
Control Delay	13.6	18.7	4.8	2.3	18.9	0.7	76.1	21.8	37.3	36.4	8.2
Queue Delay	0.0	0.2	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	18.9	4.8	2.3	21.9	0.7	76.1	21.8	37.3	36.4	8.2
LOS	B	B	A	A	C	A	E	C	D	D	A
Approach Delay		15.9			20.8			71.2		15.5	
Approach LOS		B			C			E		B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	80	877	224	16	1361	56	285	28	21	13	100
v/c Ratio	0.36	0.48	0.21	0.04	0.82	0.06	0.89	0.07	0.07	0.03	0.22
Control Delay	13.6	18.7	4.8	2.3	18.9	0.7	76.1	21.8	37.3	36.4	8.2
Queue Delay	0.0	0.2	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	18.9	4.8	2.3	21.9	0.7	76.1	21.8	37.3	36.4	8.2
Queue Length 50th (ft)	14	222	7	1	628	6	228	8	14	8	0
Queue Length 95th (ft)	m52	389	98	m2	65	m0	#363	33	36	26	44
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	227	1820	1087	407	1664	950	361	453	360	487	487
Starvation Cap Reductn	0	269	0	0	126	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	203	0	0	0	0	0	6
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.57	0.21	0.04	0.93	0.06	0.79	0.06	0.06	0.03	0.21

Intersection Summary

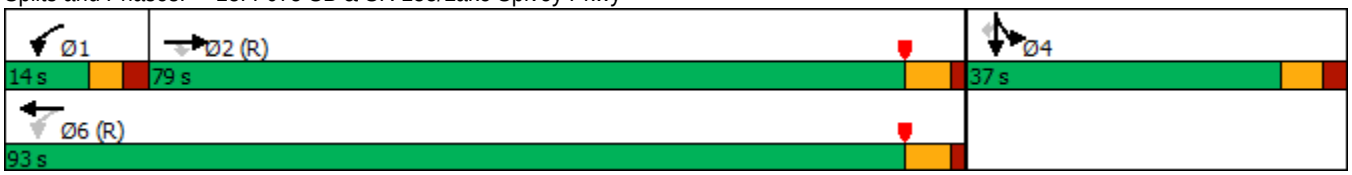
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

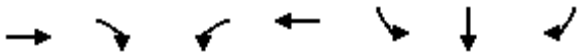
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1356	74	135	1248	194	0	536
Future Volume (vph)	1356	74	135	1248	194	0	536
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	70.4	70.4	84.3	84.3	33.3	33.3	33.3
Actuated g/C Ratio	0.54	0.54	0.65	0.65	0.26	0.26	0.26
v/c Ratio	0.67	0.09	0.65	0.74	0.25	0.25	0.82
Control Delay	18.3	3.6	27.8	3.9	39.6	39.7	56.1
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	18.3	3.6	27.8	4.2	39.6	39.7	56.1
LOS	B	A	C	A	D	D	E
Approach Delay	17.5			6.5		51.8	
Approach LOS	B			A		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1490	81	148	1371	106	107	589
v/c Ratio	0.67	0.09	0.65	0.74	0.25	0.25	0.82
Control Delay	18.3	3.6	27.8	3.9	39.6	39.7	56.1
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	18.3	3.6	27.8	4.2	39.6	39.7	56.1
Queue Length 50th (ft)	306	10	35	23	73	73	260
Queue Length 95th (ft)	160	m12	m30	m2	132	132	#373
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2345	936	233	1931	437	437	725
Starvation Cap Reductn	0	0	0	157	0	0	0
Spillback Cap Reductn	0	0	0	139	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.09	0.64	0.77	0.24	0.24	0.81

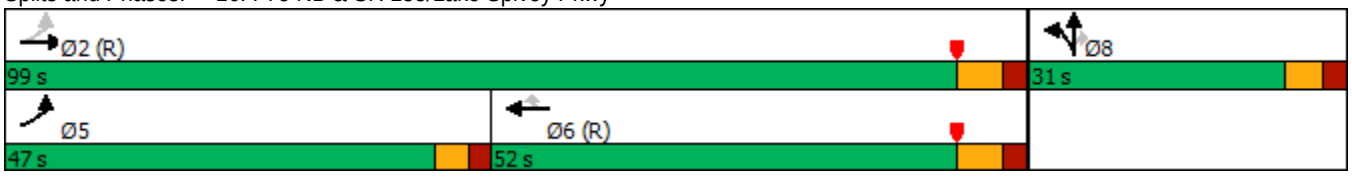
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	680	1195	1047	761	304	0	216
Future Volume (vph)	680	1195	1047	761	304	0	216
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	100.8	99.4	45.1	45.1	17.6	17.6	17.6
Actuated g/C Ratio	0.78	0.76	0.35	0.35	0.14	0.14	0.14
v/c Ratio	1.03	0.54	1.04	0.99	0.74	0.74	0.81
Control Delay	65.0	12.5	64.3	35.1	72.1	72.1	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	12.5	64.3	35.1	72.1	72.1	52.7
LOS	E	B	E	D	E	E	D
Approach Delay		31.5	52.0			64.0	
Approach LOS		C	D			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 44.4	Intersection LOS: D
Intersection Capacity Utilization 108.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	747	1313	1151	836	167	167	237
v/c Ratio	1.03	0.54	1.04	0.99	0.74	0.74	0.81
Control Delay	65.0	12.5	64.3	35.1	72.1	72.1	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	12.5	64.3	35.1	72.1	72.1	52.7
Queue Length 50th (ft)	~626	393	~538	140	144	144	121
Queue Length 95th (ft)	#970	549	m#668	m#322	213	213	204
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	723	2443	1108	842	321	321	378
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.54	1.04	0.99	0.52	0.52	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

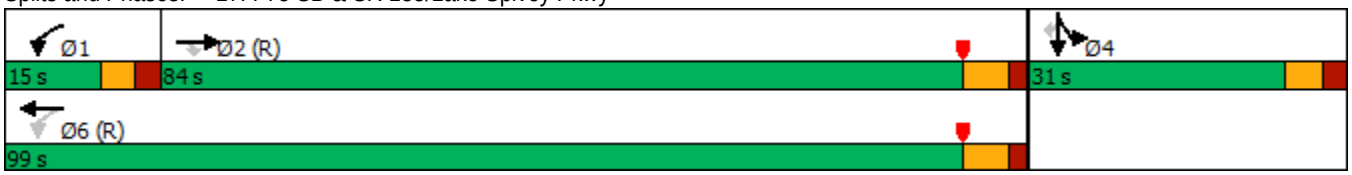
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

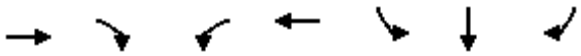
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1499	323	117	1185	391	0	266
Future Volume (vph)	1499	323	117	1185	391	0	266
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	82.0	82.0	96.7	96.2	21.3	21.3	21.3
Actuated g/C Ratio	0.63	0.63	0.74	0.74	0.16	0.16	0.16
v/c Ratio	0.83	0.32	0.64	0.56	0.79	0.79	0.50
Control Delay	16.6	2.5	38.4	1.1	72.1	72.1	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	2.5	38.4	1.1	72.1	72.1	23.7
LOS	B	A	D	A	E	E	C
Approach Delay	14.1			4.5		52.5	
Approach LOS	B			A		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 108.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1666	359	130	1317	217	217	296
v/c Ratio	0.83	0.32	0.64	0.56	0.79	0.79	0.50
Control Delay	16.6	2.5	38.4	1.1	72.1	72.1	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	2.5	38.4	1.1	72.1	72.1	23.7
Queue Length 50th (ft)	318	25	37	0	184	184	55
Queue Length 95th (ft)	m342	m25	m43	m0	276	276	103
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	2016	1131	214	2364	320	320	665
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.32	0.61	0.56	0.68	0.68	0.45

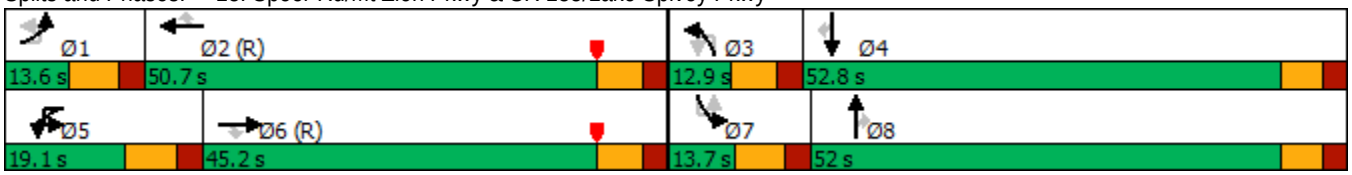
Intersection Summary

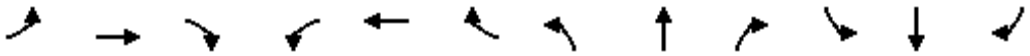
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	881	73	245	953	138	69	191	702	143	82	66
Future Volume (vph)	79	881	73	245	953	138	69	191	702	143	82	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	7.6	40.2	40.2	17.4	50.0	50.0	6.0	37.5	37.5	6.3	40.9	40.9
Actuated g/C Ratio	0.06	0.31	0.31	0.13	0.38	0.38	0.05	0.29	0.29	0.05	0.31	0.31
v/c Ratio	0.43	1.01	0.13	0.72	0.85	0.22	0.48	0.21	0.84	0.95	0.08	0.12
Control Delay	63.7	70.2	3.6	82.9	32.3	3.2	71.0	34.2	43.2	118.1	30.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	70.2	3.6	82.9	32.3	3.2	71.0	34.2	43.2	118.1	30.9	0.4
LOS	E	E	A	F	C	A	E	C	D	F	C	A
Approach Delay		65.0			40.2			43.4			66.7	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 50.1	Intersection LOS: D
Intersection Capacity Utilization 86.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	968	80	325	1047	152	76	210	771	157	90	73
v/c Ratio	0.43	1.01	0.13	0.72	0.85	0.22	0.48	0.21	0.84	0.95	0.08	0.12
Control Delay	63.7	70.2	3.6	82.9	32.3	3.2	71.0	34.2	43.2	118.1	30.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	70.2	3.6	82.9	32.3	3.2	71.0	34.2	43.2	118.1	30.9	0.4
Queue Length 50th (ft)	38	~484	4	148	267	7	32	70	282	69	28	0
Queue Length 95th (ft)	m64	#621	m17	#262	#596	23	59	94	342	#140	46	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	200	961	593	452	1228	702	158	1235	1074	166	1257	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.01	0.13	0.72	0.85	0.22	0.48	0.17	0.72	0.95	0.07	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

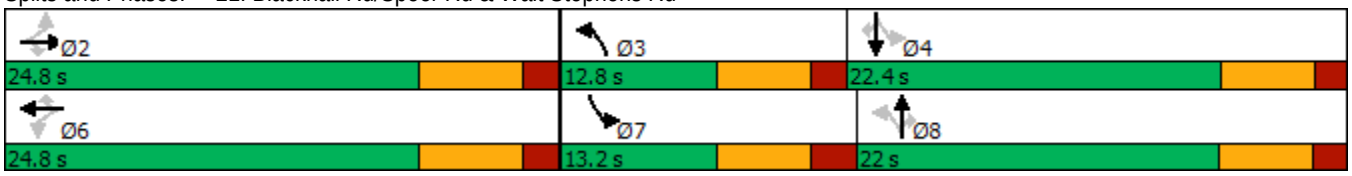
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

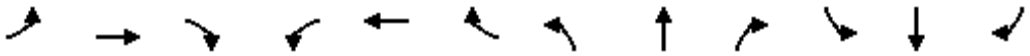
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	244	52	107	290	567	46	355	90	187	74	15
Future Volume (vph)	30	244	52	107	290	567	46	355	90	187	74	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	17.8	17.8	17.8	17.8	17.8	17.8	22.2	15.1	15.1	24.6	21.0	21.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.26	0.26	0.42	0.36	0.36
v/c Ratio	0.13	0.48	0.10	0.39	0.58	0.50	0.09	0.82	0.19	0.57	0.12	0.03
Control Delay	16.6	20.2	0.3	21.0	22.3	3.2	8.9	37.2	2.0	16.5	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	20.2	0.3	21.0	22.3	3.2	8.9	37.2	2.0	16.5	16.3	0.1
LOS	B	C	A	C	C	A	A	D	A	B	B	A
Approach Delay		16.7			10.9			28.1			15.6	
Approach LOS		B			B			C			B	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 58.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 76.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	274	58	120	326	637	52	399	101	210	83	17
v/c Ratio	0.13	0.48	0.10	0.39	0.58	0.50	0.09	0.82	0.19	0.57	0.12	0.03
Control Delay	16.6	20.2	0.3	21.0	22.3	3.2	8.9	37.2	2.0	16.5	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	20.2	0.3	21.0	22.3	3.2	8.9	37.2	2.0	16.5	16.3	0.1
Queue Length 50th (ft)	9	79	0	34	98	0	9	133	0	41	23	0
Queue Length 95th (ft)	27	139	0	74	167	32	24	#257	10	#78	51	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	274	593	610	319	587	1312	553	519	560	371	671	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.46	0.10	0.38	0.56	0.49	0.09	0.77	0.18	0.57	0.12	0.03

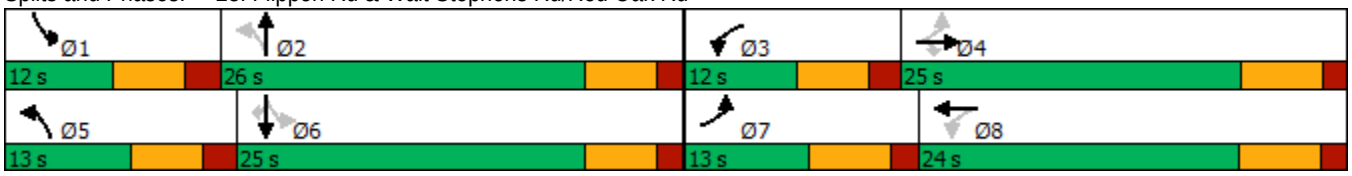
Intersection Summary

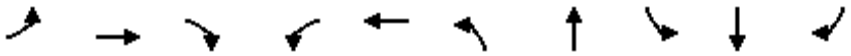
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	202	157	410	20	171	302	345	21	272	172
Future Volume (vph)	202	157	410	20	171	302	345	21	272	172
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	24.2	21.7	21.7	19.3	12.9	27.5	25.4	22.3	16.6	16.6
Actuated g/C Ratio	0.36	0.32	0.32	0.29	0.19	0.41	0.38	0.33	0.25	0.25
v/c Ratio	0.59	0.29	0.56	0.06	0.62	0.89	0.58	0.07	0.67	0.35
Control Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
LOS	C	C	A	B	C	D	C	B	C	A
Approach Delay		13.5			30.8		34.5		20.9	
Approach LOS		B			C		C		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 67.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	224	174	456	22	219	336	401	23	302	191
v/c Ratio	0.59	0.29	0.56	0.06	0.62	0.89	0.58	0.07	0.67	0.35
Control Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	21.5	5.7	13.9	32.5	46.5	24.3	12.8	31.9	4.6
Queue Length 50th (ft)	65	49	0	6	82	93	113	5	113	0
Queue Length 95th (ft)	118	120	68	19	149	#272	#310	19	206	36
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	382	610	825	395	491	377	695	344	529	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.29	0.55	0.06	0.45	0.89	0.58	0.07	0.57	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1089	722	291	603	435	436
Future Volume (veh/h)	1089	722	291	603	435	436
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1184	785	316	655	473	474
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1376	614	300	2042	695	561
Arrive On Green	0.47	0.47	0.15	0.66	0.25	0.25
Sat Flow, veh/h	3011	1309	1555	3185	2826	2281
Grp Volume(v), veh/h	1184	785	316	655	473	474
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1413	1141
Q Serve(g_s), s	53.9	70.3	22.3	13.7	22.7	29.7
Cycle Q Clear(g_c), s	53.9	70.3	22.3	13.7	22.7	29.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1376	614	300	2042	695	561
V/C Ratio(X)	0.86	1.28	1.05	0.32	0.68	0.85
Avail Cap(c_a), veh/h	1376	614	300	2042	906	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	39.8	47.9	11.1	51.2	53.8
Incr Delay (d2), s/veh	7.2	137.9	66.1	0.4	1.8	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	44.5	16.7	4.5	8.0	17.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.7	177.8	114.1	11.5	53.1	61.9
LnGrp LOS	D	F	F	B	D	E
Approach Vol, veh/h	1969			971	947	
Approach Delay, s/veh	96.6			44.9	57.5	
Approach LOS	F			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		106.0		44.0	28.4	77.6
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		15.7		31.7	24.3	72.3
Green Ext Time (p_c), s		10.2		5.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	74.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	1570	13	16	1047	302	27	37	72	351	5	156
Future Volume (veh/h)	243	1570	13	16	1047	302	27	37	72	351	5	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	253	1635	14	17	1091	315	28	39	75	366	5	162
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	246	1732	15	69	1274	568	109	155	263	428	16	522
Arrive On Green	0.10	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1570	3039	26	303	2962	1321	237	459	778	1279	48	1545
Grp Volume(v), veh/h	253	804	845	17	1091	315	142	0	0	366	0	167
Grp Sat Flow(s),veh/h/ln	1570	1495	1569	303	1481	1321	1473	0	0	1279	0	1592
Q Serve(g_s), s	15.0	75.0	75.2	8.3	46.3	22.4	1.3	0.0	0.0	35.5	0.0	11.6
Cycle Q Clear(g_c), s	15.0	75.0	75.2	62.5	46.3	22.4	13.0	0.0	0.0	48.4	0.0	11.6
Prop In Lane	1.00		0.02	1.00		1.00	0.20		0.53	1.00		0.97
Lane Grp Cap(c), veh/h	246	853	895	69	1274	568	527	0	0	428	0	538
V/C Ratio(X)	1.03	0.94	0.94	0.25	0.86	0.55	0.27	0.00	0.00	0.86	0.00	0.31
Avail Cap(c_a), veh/h	246	853	895	69	1274	568	533	0	0	433	0	545
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.13	0.13	0.13	0.85	0.85	0.85	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.5	30.0	30.0	58.3	28.2	23.1	36.2	0.0	0.0	51.5	0.0	36.7
Incr Delay (d2), s/veh	28.5	3.9	3.9	7.1	6.5	3.3	0.3	0.0	0.0	15.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	26.7	28.0	0.8	15.8	6.8	4.1	0.0	0.0	15.3	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.0	33.9	33.9	65.4	34.7	26.4	36.4	0.0	0.0	66.8	0.0	37.1
LnGrp LOS	F	C	C	E	C	C	D	A	A	E	A	D
Approach Vol, veh/h		1902			1423			142			533	
Approach Delay, s/veh		38.3			33.2			36.4			57.5	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	21.0	71.6		57.4		92.6		57.4				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	15.0	63.9		51.3		84.9		51.3				
Max Q Clear Time (g_c+I1), s	17.0	64.5		50.4		77.2		15.0				
Green Ext Time (p_c), s	0.0	0.0		0.2		7.1		1.0				

Intersection Summary		
HCM 6th Ctrl Delay	39.0	
HCM 6th LOS	D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1822	330	229	1143	18	180	55	205	13	54	29
Future Volume (veh/h)	27	1822	330	229	1143	18	180	55	205	13	54	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1859	337	234	1166	18	184	56	209	13	55	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	331	1827	815	204	2081	32	229	282	239	45	160	78
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2906	1296	1795	3014	47	1313	1870	1585	116	1062	520
Grp Volume(v), veh/h	28	1859	337	234	578	606	184	56	209	98	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1296	1795	1495	1566	1313	1870	1585	1698	0	0
Q Serve(g_s), s	0.8	94.3	19.6	13.0	29.3	29.3	15.1	3.9	19.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	94.3	19.6	13.0	29.3	29.3	22.6	3.9	19.4	7.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	0.13		0.31
Lane Grp Cap(c), veh/h	331	1827	815	204	1032	1081	229	282	239	283	0	0
V/C Ratio(X)	0.08	1.02	0.41	1.15	0.56	0.56	0.80	0.20	0.88	0.35	0.00	0.00
Avail Cap(c_a), veh/h	358	1827	815	204	1032	1081	229	282	239	283	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.37	0.37	0.37	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	27.9	14.0	57.4	11.7	11.7	64.6	55.8	62.3	57.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	25.6	1.5	86.7	0.8	0.8	20.6	0.7	29.9	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	35.8	5.8	12.4	9.5	9.9	8.3	1.9	9.7	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	53.4	15.5	144.1	12.5	12.5	85.2	56.5	92.2	58.8	0.0	0.0
LnGrp LOS	B	F	B	F	B	B	F	E	F	E	A	A
Approach Vol, veh/h		2224			1418			449			98	
Approach Delay, s/veh		47.1			34.2			84.9			58.8	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	110.3		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.8	31.3		9.5	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	25.7		0.6	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	47.1
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.2

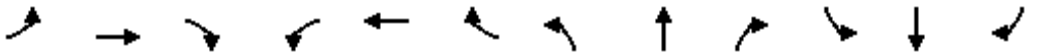
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	4	128	25	5	35	119	1169	37	38	1987	95
Future Vol, veh/h	30	4	128	25	5	35	119	1169	37	38	1987	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	31	4	133	26	5	36	124	1218	39	40	2070	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3010	3655	1035	2583	3715	609	2169	0	0	1257	0	0
Stage 1	2150	2150	-	1466	1466	-	-	-	-	-	-	-
Stage 2	860	1505	-	1117	2249	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 6	5	229	~ 13	~ 4	438	243	-	-	549	-	-
Stage 1	49	86	-	134	191	-	-	-	-	-	-	-
Stage 2	317	182	-	221	77	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 2	229	-	~ 2	438	243	-	-	549	-	-
Mov Cap-2 Maneuver	-	~ 2	-	-	~ 2	-	-	-	-	-	-	-
Stage 1	~ 24	80	-	66	94	-	-	-	-	-	-	-
Stage 2	134	89	-	81	71	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			3.1	0.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	243	-	-	-	229	-	438	549	-	-
HCM Lane V/C Ratio	0.51	-	-	-	0.582	-	0.083	0.072	-	-
HCM Control Delay (s)	34.3	-	-	-	40.5	-	14	12.1	-	-
HCM Lane LOS	D	-	-	-	E	-	B	B	-	-
HCM 95th %tile Q(veh)	2.7	-	-	-	3.3	-	0.3	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	173	1313	125	172	126	757	439	71	70	706	151
Future Volume (veh/h)	282	173	1313	125	172	126	757	439	71	70	706	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	294	180	1368	130	179	131	789	457	74	73	735	157
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	387	499	1314	177	326	276	816	1405	766	91	791	353
Arrive On Green	0.05	0.09	0.09	0.04	0.17	0.17	0.27	0.48	0.48	0.05	0.27	0.27
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	294	180	1368	130	179	131	789	457	74	73	735	157
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	23.5	16.3	48.0	8.0	15.7	13.4	46.1	17.4	4.6	7.3	43.5	17.8
Cycle Q Clear(g_c), s	23.5	16.3	48.0	8.0	15.7	13.4	46.1	17.4	4.6	7.3	43.5	17.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	499	1314	177	326	276	816	1405	766	91	791	353
V/C Ratio(X)	0.76	0.36	1.04	0.73	0.55	0.47	0.97	0.33	0.10	0.80	0.93	0.44
Avail Cap(c_a), veh/h	400	499	1314	177	326	276	819	1405	766	147	805	359
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	67.6	46.2	61.6	67.8	66.9	65.1	28.5	25.2	84.5	64.3	54.9
Incr Delay (d2), s/veh	3.2	0.2	27.4	15.0	2.2	1.5	23.6	0.6	0.3	34.5	18.8	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	8.3	29.2	2.5	7.8	5.5	20.3	6.2	1.8	4.2	18.2	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	67.8	73.6	76.6	70.1	68.4	88.7	29.1	25.5	119.0	83.1	58.9
LnGrp LOS	E	E	F	E	E	E	F	C	C	F	F	E
Approach Vol, veh/h		1842			440			1320			965	
Approach Delay, s/veh		70.6			71.5			64.5			81.8	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	93.9	31.6	38.4	55.0	55.0	15.0	55.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	14.9	82.3	27.0	29.0	48.4	48.9	8.0	* 48
Max Q Clear Time (g_c+I1), s	9.3	19.4	25.5	17.7	48.1	45.5	10.0	50.0
Green Ext Time (p_c), s	0.1	7.2	0.1	1.3	0.1	2.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1924	408	45	1248	61	272	28	52	70	27	188
Future Volume (veh/h)	165	1924	408	45	1248	61	272	28	52	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2004	0	47	1300	64	283	29	54	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	386	1947		236	1911	1052	249	113	210	238	361	306
Arrive On Green	0.09	1.00	0.00	0.06	1.00	1.00	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	1157	585	1089	1315	1870	1585
Grp Volume(v), veh/h	172	2004	0	47	1300	64	283	0	83	73	28	196
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1157	0	1674	1315	1870	1585
Q Serve(g_s), s	6.0	0.0	0.0	1.5	0.0	0.0	32.5	0.0	7.6	9.0	2.2	20.5
Cycle Q Clear(g_c), s	6.0	0.0	0.0	1.5	0.0	0.0	34.7	0.0	7.6	16.6	2.2	20.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	386	1947		236	1911	1052	249	0	323	238	361	306
V/C Ratio(X)	0.45	1.03		0.20	0.68	0.06	1.14	0.00	0.26	0.31	0.08	0.64
Avail Cap(c_a), veh/h	453	1947		247	1911	1052	249	0	323	240	364	308
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	0.0	8.4	0.0	0.0	76.4	0.0	61.7	68.7	59.5	66.9
Incr Delay (d2), s/veh	0.1	15.7	0.0	0.3	1.0	0.0	99.2	0.0	0.4	0.7	0.1	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.2	0.0	0.6	0.3	0.0	18.6	0.0	3.3	3.1	1.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.1	15.7	0.0	8.7	1.0	0.0	175.5	0.0	62.1	69.5	59.6	71.3
LnGrp LOS	A	F		A	A	A	F	A	E	E	E	E
Approach Vol, veh/h		2176	A		1411			366			297	
Approach Delay, s/veh		15.1			1.3			149.8			69.8	
Approach LOS		B			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	128.1		41.0	13.2	125.8		41.0
Change Period (Y+Rc), s	5.5	* 6.3		* 6.3	5.0	* 6.3		* 6.3
Max Green Setting (Gmax), s	6.5	* 1.2E2		* 35	15.0	* 1.1E2		* 35
Max Q Clear Time (g_c+I1), s	13.5	2.0		22.5	8.0	2.0		36.7
Green Ext Time (p_c), s	0.0	82.6		0.8	0.2	35.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2222	71	117	1398	0	0	0	0	564	0	706
Future Volume (veh/h)	0	2222	71	117	1398	0	0	0	0	564	0	706
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2291	73	121	1441	0				581	0	728
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	2692	836	198	2064	0				762	0	678
Arrive On Green	0.00	1.00	1.00	0.04	0.95	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1284	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	2291	73	121	1441	0				581	0	728
Grp Sat Flow(s),veh/h/ln	0	1378	1284	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	4.0	12.4	0.0				27.6	0.0	38.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.0	12.4	0.0				27.6	0.0	38.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2692	836	198	2064	0				762	0	678
V/C Ratio(X)	0.00	0.85	0.09	0.61	0.70	0.00				0.76	0.00	1.07
Avail Cap(c_a), veh/h	0	2692	836	198	2064	0				762	0	678
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.33	0.33	0.28	0.28	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.9	1.5	0.0				66.5	0.0	70.8
Incr Delay (d2), s/veh	0.0	1.2	0.1	1.1	0.6	0.0				4.7	0.0	56.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	1.6	1.5	0.0				12.9	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.2	0.1	10.0	2.0	0.0				71.2	0.0	126.8
LnGrp LOS	A	A	A	B	A	A				E	A	F
Approach Vol, veh/h		2364			1562						1309	
Approach Delay, s/veh		1.2			2.6						102.1	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	123.1		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	6.0	2.0		40.5		14.4
Green Ext Time (p_c), s	0.0	90.7		0.0		42.5

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	1921	0	0	1327	508	233	0	169	0	0	0
Future Volume (veh/h)	284	1921	0	0	1327	508	233	0	169	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	309	2088	0	0	1442	0	253	0	184			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	423	2591	0	0	2266		460	0	205			
Arrive On Green	0.14	1.00	0.00	0.00	1.00	0.00	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	3563	0	1585			
Grp Volume(v), veh/h	309	2088	0	0	1442	0	253	0	184			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	9.8	0.0	0.0	0.0	0.0	0.0	12.0	0.0	20.6			
Cycle Q Clear(g_c), s	9.8	0.0	0.0	0.0	0.0	0.0	12.0	0.0	20.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	423	2591	0	0	2266		460	0	205			
V/C Ratio(X)	0.73	0.81	0.00	0.00	0.64		0.55	0.00	0.90			
Avail Cap(c_a), veh/h	580	2591	0	0	2266		730	0	325			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.13	0.13	0.00	0.00	0.35	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	5.1	0.0	0.0	0.0	0.0	0.0	73.5	0.0	77.2			
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.0	0.5	0.0	0.4	0.0	12.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.0	0.0	0.2	0.0	5.4	0.0	8.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	0.4	0.0	0.0	0.5	0.0	73.9	0.0	89.7			
LnGrp LOS	A	A	A	A	A		E	A	F			
Approach Vol, veh/h		2397			1442	A		437				
Approach Delay, s/veh		1.0			0.5			80.5				
Approach LOS		A			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		150.7			18.0	132.6		29.3				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			11.8	2.0		22.6				
Green Ext Time (p_c), s		91.8			0.8	39.3		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1321	291	171	1476	0	0	0	0	885	0	751
Future Volume (veh/h)	0	1321	291	171	1476	0	0	0	0	885	0	751
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1405	310	182	1570	0				941	0	799
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1743	851	292	2027	0				1089	0	969
Arrive On Green	0.00	1.00	1.00	0.04	0.42	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	3170
Grp Volume(v), veh/h	0	1405	310	182	1570	0				941	0	799
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	8.0	74.9	0.0				44.9	0.0	42.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.0	74.9	0.0				44.9	0.0	42.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1743	851	292	2027	0				1089	0	969
V/C Ratio(X)	0.00	0.81	0.36	0.62	0.77	0.00				0.86	0.00	0.82
Avail Cap(c_a), veh/h	0	1743	851	294	2027	0				1520	0	1353
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.59	0.59	0.64	0.64	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	16.0	41.4	0.0				59.0	0.0	58.0
Incr Delay (d2), s/veh	0.0	2.5	0.7	2.6	1.9	0.0				4.0	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.2	3.6	31.6	0.0				20.2	0.0	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.5	0.7	18.7	43.3	0.0				62.9	0.0	61.0
LnGrp LOS	A	A	A	B	D	A				E	A	E
Approach Vol, veh/h		1715			1752						1740	
Approach Delay, s/veh		2.1			40.8						62.1	
Approach LOS		A			D						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.8	103.0		61.2		118.8
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	10.0	2.0		46.9		76.9
Green Ext Time (p_c), s	0.0	41.0		8.2		11.7

Intersection Summary	
HCM 6th Ctrl Delay	35.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	801	117	720	981	275	73	172	284	393	356	161
Future Volume (veh/h)	141	801	117	720	981	275	73	172	284	393	356	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	843	123	758	1033	289	77	181	299	414	375	169
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	185	1130	567	803	1740	850	113	426	334	454	787	351
Arrive On Green	0.11	0.72	0.72	0.39	0.90	0.90	0.03	0.12	0.12	0.13	0.22	0.22
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	148	843	123	758	1033	289	77	181	299	414	375	169
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	7.5	29.3	4.7	38.1	12.8	4.9	4.0	8.5	19.0	21.3	16.5	16.7
Cycle Q Clear(g_c), s	7.5	29.3	4.7	38.1	12.8	4.9	4.0	8.5	19.0	21.3	16.5	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1130	567	803	1740	850	113	426	334	454	787	351
V/C Ratio(X)	0.80	0.75	0.22	0.94	0.59	0.34	0.68	0.42	0.89	0.91	0.48	0.48
Avail Cap(c_a), veh/h	227	1130	567	893	1740	850	136	462	363	491	837	373
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.5	20.6	17.1	54.0	5.0	4.6	86.1	73.5	78.1	77.1	61.0	61.1
Incr Delay (d2), s/veh	13.2	3.8	0.7	9.5	0.7	0.5	10.2	0.7	22.4	20.3	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	7.0	1.7	15.8	2.6	1.4	1.9	3.9	7.8	10.7	7.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.7	24.5	17.9	63.5	5.7	5.1	96.3	74.1	100.5	97.5	61.4	62.1
LnGrp LOS	F	C	B	E	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1114			2080			557			958	
Approach Delay, s/veh		32.8			26.7			91.4			77.1	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	103.7	12.8	46.5	49.3	71.5	31.1	28.2
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	9.5	14.8	6.0	18.7	40.1	31.3	23.3	21.0
Green Ext Time (p_c), s	0.1	26.1	0.0	2.9	1.7	11.5	0.4	0.6

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

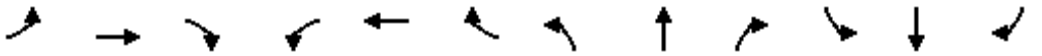
Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	115	436	300	60	90	190
Future Vol, veh/h	115	436	300	60	90	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	128	484	333	67	100	211

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	400	0	-	0	1073	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	740	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1170	-	-	-	244	709
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	217	709
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1170	-	-	-	217	709
HCM Lane V/C Ratio	0.109	-	-	-	0.461	0.298
HCM Control Delay (s)	8.5	-	-	-	35	12.2
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	2.2	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	425	78	112	305	280	43	173	95	652	422	18
Future Volume (veh/h)	29	425	78	112	305	280	43	173	95	652	422	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	429	79	113	308	283	43	175	96	659	426	18
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	221	500	423	164	500	745	384	312	264	678	705	598
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.38	0.38
Sat Flow, veh/h	832	1885	1598	899	1885	2812	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	29	429	79	113	308	283	43	175	96	659	426	18
Grp Sat Flow(s),veh/h/ln	832	1885	1598	899	1885	1406	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.9	13.0	2.3	2.9	8.6	4.9	1.1	5.2	3.2	15.8	11.0	0.4
Cycle Q Clear(g_c), s	10.5	13.0	2.3	15.9	8.6	4.9	1.1	5.2	3.2	15.8	11.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	500	423	164	500	745	384	312	264	678	705	598
V/C Ratio(X)	0.13	0.86	0.19	0.69	0.62	0.38	0.11	0.56	0.36	0.97	0.60	0.03
Avail Cap(c_a), veh/h	221	500	423	164	500	745	485	312	264	678	705	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	21.0	17.0	29.4	19.4	18.0	18.4	23.0	22.2	15.5	15.1	11.8
Incr Delay (d2), s/veh	0.6	15.0	0.5	14.8	3.3	0.7	0.1	2.3	0.8	27.4	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.9	0.8	2.2	3.7	1.4	0.4	2.2	1.1	10.8	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	36.0	17.5	44.3	22.7	18.7	18.5	25.3	23.0	43.0	16.5	11.8
LnGrp LOS	C	D	B	D	C	B	B	C	C	D	B	B
Approach Vol, veh/h		537			704			314			1103	
Approach Delay, s/veh		32.7			24.6			23.7			32.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.4	28.4		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		15.0	3.1	13.0		17.9	17.8	7.2				
Green Ext Time (p_c), s		0.4	0.0	1.3		0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	280	561	43	156	33	407	382	35	54	556	254
Future Volume (veh/h)	223	280	561	43	156	33	407	382	35	54	556	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	240	301	0	46	168	35	438	411	38	58	598	273
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	275	343		162	205	43	382	773	71	441	688	583
Arrive On Green	0.09	0.18	0.00	0.05	0.14	0.14	0.14	0.46	0.46	0.05	0.36	0.36
Sat Flow, veh/h	1795	1885	1598	1795	1513	315	1781	1686	156	1795	1885	1598
Grp Volume(v), veh/h	240	301	0	46	0	203	438	0	449	58	598	273
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1828	1781	0	1842	1795	1885	1598
Q Serve(g_s), s	6.1	14.0	0.0	0.0	0.0	9.7	13.0	0.0	15.7	1.8	26.6	7.7
Cycle Q Clear(g_c), s	6.1	14.0	0.0	0.0	0.0	9.7	13.0	0.0	15.7	1.8	26.6	7.7
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	275	343		162	0	248	382	0	844	441	688	583
V/C Ratio(X)	0.87	0.88		0.28	0.00	0.82	1.15	0.00	0.53	0.13	0.87	0.47
Avail Cap(c_a), veh/h	275	390		204	0	364	382	0	844	469	688	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.00	1.00	0.00	1.00	0.56	0.00	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	35.8	0.0	41.0	0.0	37.8	22.3	0.0	17.5	16.2	26.6	9.3
Incr Delay (d2), s/veh	17.8	12.8	0.0	1.0	0.0	9.0	83.0	0.0	1.3	0.1	14.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	7.3	0.0	1.0	0.0	4.8	13.5	0.0	6.2	0.7	13.5	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	48.6	0.0	41.9	0.0	46.8	105.3	0.0	18.8	16.3	40.7	12.0
LnGrp LOS	E	D		D	A	D	F	A	B	B	D	B
Approach Vol, veh/h		541	A		249			887			929	
Approach Delay, s/veh		52.0			45.9			61.5			30.7	
Approach LOS		D			D			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	46.8	10.2	22.4	19.0	38.4	14.3	18.3
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.6	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	13.8	17.7	2.0	16.0	15.0	28.6	8.1	11.7
Green Ext Time (p_c), s	0.0	4.5	0.0	0.4	0.0	0.2	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	47.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1089	722	291	603	435	436
Future Volume (vph)	1089	722	291	603	435	436
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.1	59.1	103.2	102.0	33.6	33.6
Actuated g/C Ratio	0.39	0.39	0.69	0.68	0.22	0.22
v/c Ratio	1.03	0.80	0.75	0.32	0.75	0.54
Control Delay	79.6	9.3	50.7	10.9	61.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	9.3	50.7	10.9	61.8	5.9
LOS	E	A	D	B	E	A
Approach Delay	51.6			23.9	33.8	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 40.3	Intersection LOS: D
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1184	785	316	655	473	474
v/c Ratio	1.03	0.80	0.75	0.32	0.75	0.54
Control Delay	79.6	9.3	50.7	10.9	61.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	9.3	50.7	10.9	61.8	5.9
Queue Length 50th (ft)	~651	4	233	127	225	0
Queue Length 95th (ft)	#791	150	#447	191	269	46
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1146	985	422	2079	898	1051
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.80	0.75	0.32	0.53	0.45

Intersection Summary

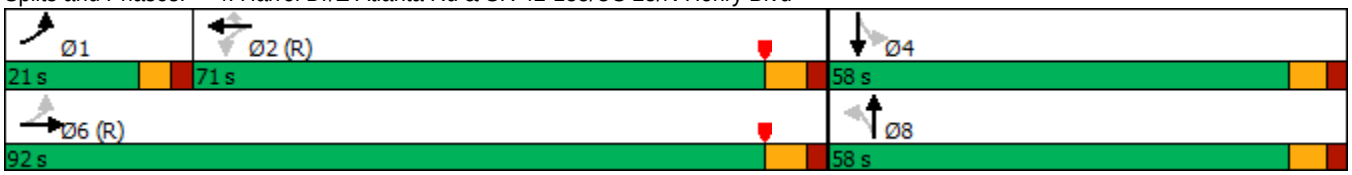
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

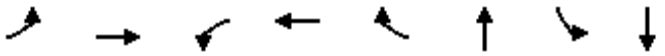
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	243	1570	16	1047	302	27	37	351	5
Future Volume (vph)	243	1570	16	1047	302	27	37	351	5
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases	1	6		2			8		4
Permitted Phases	6		2		2	8		4	
Detector Phase	1	6	2	2	2	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	21.0	92.0	71.0	71.0	71.0	58.0	58.0	58.0	58.0
Total Split (%)	14.0%	61.3%	47.3%	47.3%	47.3%	38.7%	38.7%	38.7%	38.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1		6.7	6.7	6.7
Lead/Lag	Lead		Lag	Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	88.8	87.7	63.8	63.8	63.8		48.5	48.5	48.5
Actuated g/C Ratio	0.59	0.58	0.43	0.43	0.43		0.32	0.32	0.32
v/c Ratio	0.93	0.95	0.25	0.87	0.45		0.27	0.96	0.27
Control Delay	55.6	15.5	35.7	38.6	6.4		32.5	85.8	6.3
Queue Delay	0.0	11.2	0.0	0.2	0.0		0.0	3.0	0.0
Total Delay	55.6	26.8	35.7	38.8	6.4		32.5	88.8	6.3
LOS	E	C	D	D	A		C	F	A
Approach Delay		30.6		31.6			32.5		62.9
Approach LOS		C		C			C		E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 146 (97%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 35.3	Intersection LOS: D
Intersection Capacity Utilization 102.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	253	1649	17	1091	315	142	366	168
v/c Ratio	0.93	0.95	0.25	0.87	0.45	0.27	0.96	0.27
Control Delay	55.6	15.5	35.7	38.6	6.4	32.5	85.8	6.3
Queue Delay	0.0	11.2	0.0	0.2	0.0	0.0	3.0	0.0
Total Delay	55.6	26.8	35.7	38.8	6.4	32.5	88.8	6.3
Queue Length 50th (ft)	~176	535	7	411	0	85	341	3
Queue Length 95th (ft)	m#183	m523	m24	497	110	143	#539	56
Internal Link Dist (ft)		3939		643		194		367
Turn Bay Length (ft)	150		100					
Base Capacity (vph)	271	1728	68	1250	703	555	404	651
Starvation Cap Reductn	0	0	0	10	0	0	0	0
Spillback Cap Reductn	0	105	0	0	0	17	12	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	1.02	0.25	0.88	0.45	0.26	0.93	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

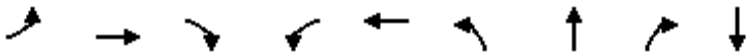
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	27	1822	330	229	1143	180	55	205	13	54
Future Volume (vph)	27	1822	330	229	1143	180	55	205	13	54
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6	2		8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.5	94.3	94.3	114.0	106.2	22.6	22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.63	0.76	0.71	0.15	0.15	0.15		0.15
v/c Ratio	0.08	1.02	0.37	1.12	0.57	1.02	0.20	0.63		0.37
Control Delay	5.4	55.3	4.7	138.1	4.9	133.9	57.9	36.8		54.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	5.4	55.3	4.7	138.1	4.9	133.9	57.9	36.8		54.5
LOS	A	E	A	F	A	F	E	D		D
Approach Delay		47.0			26.9		79.2			54.5
Approach LOS		D			C		E			D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 43.8	Intersection LOS: D
Intersection Capacity Utilization 96.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	28	1859	337	234	1184	184	56	209	98
v/c Ratio	0.08	1.02	0.37	1.12	0.57	1.02	0.20	0.63	0.37
Control Delay	5.4	55.3	4.7	138.1	4.9	133.9	57.9	36.8	54.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	55.3	4.7	138.1	4.9	133.9	57.9	36.8	54.5
Queue Length 50th (ft)	6	~1015	34	~216	71	~190	49	90	76
Queue Length 95th (ft)	14	#1150	85	m#311	140	#352	93	182	137
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	333	1815	903	208	2090	180	280	332	267
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.02	0.37	1.13	0.57	1.02	0.20	0.63	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

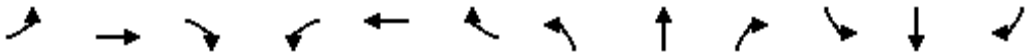
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	173	1313	125	172	126	757	439	71	70	706	151
Future Volume (vph)	282	173	1313	125	172	126	757	439	71	70	706	151
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	33.0	54.0		15.0	36.0	36.0	55.2	89.2	89.2	21.8	55.8	55.8
Total Split (%)	18.3%	30.0%		8.3%	20.0%	20.0%	30.7%	49.6%	49.6%	12.1%	31.0%	31.0%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	63.8	48.1	103.3	40.3	31.7	31.7	48.4	82.8	82.8	13.6	48.1	48.1
Actuated g/C Ratio	0.35	0.27	0.57	0.22	0.18	0.18	0.27	0.46	0.46	0.08	0.27	0.27
v/c Ratio	0.73	0.36	0.98	0.44	0.55	0.30	0.98	0.34	0.09	0.54	0.94	0.32
Control Delay	34.7	37.5	63.8	53.2	75.8	3.0	91.7	32.2	0.2	95.3	84.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	37.5	63.8	53.2	75.8	3.0	91.7	32.2	0.2	95.3	84.0	4.5
LOS	C	D	E	D	E	A	F	C	A	F	F	A
Approach Delay		56.6			47.4			66.0			71.9	
Approach LOS		E			D			E			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 61.6	Intersection LOS: E
Intersection Capacity Utilization 89.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	294	180	1368	130	179	131	789	457	74	73	735	157
v/c Ratio	0.73	0.36	0.98	0.44	0.55	0.30	0.98	0.34	0.09	0.54	0.94	0.32
Control Delay	34.7	37.5	63.8	53.2	75.8	3.0	91.7	32.2	0.2	95.3	84.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	37.5	63.8	53.2	75.8	3.0	91.7	32.2	0.2	95.3	84.0	4.5
Queue Length 50th (ft)	240	160	897	109	199	0	481	182	0	84	448	0
Queue Length 95th (ft)	m274	m181	#1078	169	289	9	#622	229	0	145	#569	34
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	413	497	1394	296	327	430	804	1328	806	146	797	492
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.36	0.98	0.44	0.55	0.30	0.98	0.34	0.09	0.50	0.92	0.32

Intersection Summary

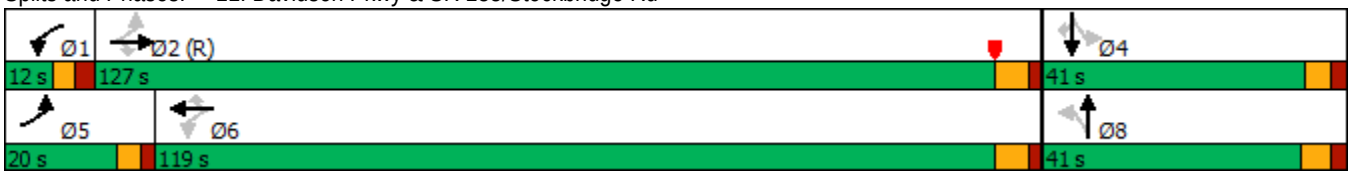
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	1924	408	45	1248	61	272	28	70	27	188
Future Volume (vph)	165	1924	408	45	1248	61	272	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	20.0	127.0	127.0	12.0	119.0	119.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	11.1%	70.6%	70.6%	6.7%	66.1%	66.1%	22.8%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	133.1	123.1	123.1	124.4	117.3	117.3	34.7	34.7	35.0	35.0	35.0
Actuated g/C Ratio	0.74	0.68	0.68	0.69	0.65	0.65	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.59	1.02	0.37	0.42	0.70	0.06	1.07	0.23	0.29	0.08	0.46
Control Delay	8.6	49.2	8.7	43.6	24.0	1.1	140.0	30.9	65.7	60.1	20.9
Queue Delay	0.0	31.5	2.2	0.0	0.3	0.0	15.2	0.0	0.0	0.0	1.0
Total Delay	8.6	80.7	10.9	43.6	24.3	1.1	155.3	30.9	65.7	60.1	21.9
LOS	A	F	B	D	C	A	F	C	E	E	C
Approach Delay		64.5			23.9			127.1		36.3	
Approach LOS		E			C			F		D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 55.4	Intersection LOS: E
Intersection Capacity Utilization 95.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	172	2004	425	47	1300	64	283	83	73	28	196
v/c Ratio	0.59	1.02	0.37	0.42	0.70	0.06	1.07	0.23	0.29	0.08	0.46
Control Delay	8.6	49.2	8.7	43.6	24.0	1.1	140.0	30.9	65.7	60.1	20.9
Queue Delay	0.0	31.5	2.2	0.0	0.3	0.0	15.2	0.0	0.0	0.0	1.0
Total Delay	8.6	80.7	10.9	43.6	24.3	1.1	155.3	30.9	65.7	60.1	21.9
Queue Length 50th (ft)	63	~1340	154	16	781	5	~367	37	75	28	48
Queue Length 95th (ft)	m62	m#1286	m151	m46	861	6	#570	92	130	60	133
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	329	1960	1141	113	1866	1060	265	360	249	362	427
Starvation Cap Reductn	0	553	558	0	145	0	0	0	0	0	0
Spillback Cap Reductn	0	53	0	0	0	0	64	0	0	0	84
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	1.42	0.73	0.42	0.76	0.06	1.41	0.23	0.29	0.08	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

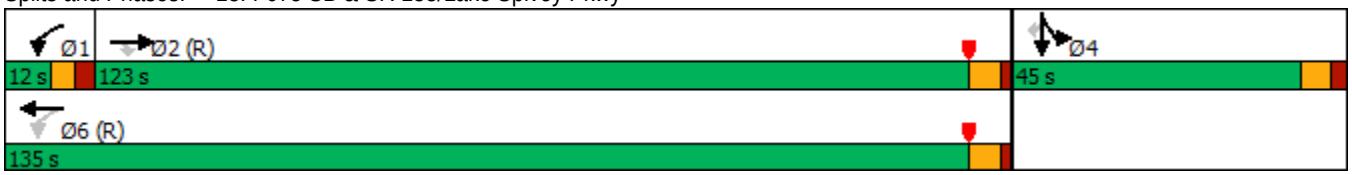
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

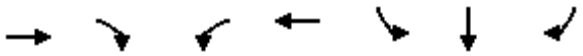
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2222	71	117	1398	564	0	706
Future Volume (vph)	2222	71	117	1398	564	0	706
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	0.86	0.09	1.12	0.70	0.81	0.81	1.22
Control Delay	18.5	6.1	141.4	11.5	85.0	85.2	170.4
Queue Delay	2.1	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	20.7	6.1	141.4	11.6	85.0	85.2	170.4
LOS	C	A	F	B	F	F	F
Approach Delay	20.2			21.7		132.5	
Approach LOS	C			C		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 48.7	Intersection LOS: D
Intersection Capacity Utilization 86.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2291	73	121	1441	290	291	728
v/c Ratio	0.86	0.09	1.12	0.70	0.81	0.81	1.22
Control Delay	18.5	6.1	141.4	11.5	85.0	85.2	170.4
Queue Delay	2.1	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	20.7	6.1	141.4	11.6	85.0	85.2	170.4
Queue Length 50th (ft)	353	7	~127	226	347	348	~597
Queue Length 95th (ft)	445	m16	m#139	250	#500	#500	#743
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2678	853	108	2054	359	359	596
Starvation Cap Reductn	251	0	0	78	0	0	0
Spillback Cap Reductn	230	0	0	49	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.09	1.12	0.73	0.81	0.81	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

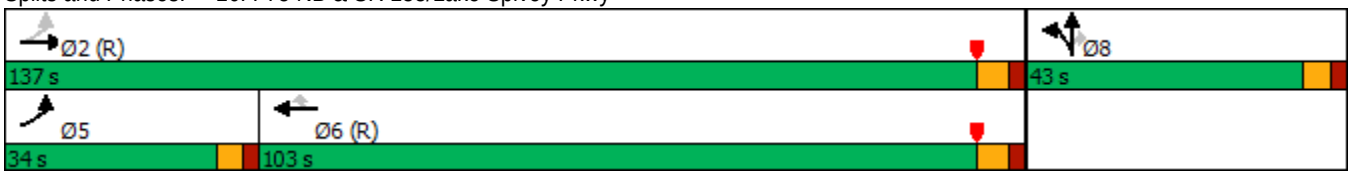
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	284	1921	1327	508	233	0	169
Future Volume (vph)	284	1921	1327	508	233	0	169
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	148.8	147.4	114.7	114.7	19.6	19.6	19.6
Actuated g/C Ratio	0.83	0.82	0.64	0.64	0.11	0.11	0.11
v/c Ratio	0.76	0.80	0.71	0.49	0.69	0.70	0.83
Control Delay	31.4	20.8	12.8	1.7	95.3	95.8	81.3
Queue Delay	0.0	21.9	0.2	0.0	0.7	0.7	0.0
Total Delay	31.4	42.7	13.1	1.7	96.0	96.5	81.3
LOS	C	D	B	A	F	F	F
Approach Delay		41.3	9.9			90.0	
Approach LOS		D	A			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 32.7	Intersection LOS: C
Intersection Capacity Utilization 85.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	309	2088	1442	552	126	127	184
v/c Ratio	0.76	0.80	0.71	0.49	0.69	0.70	0.83
Control Delay	31.4	20.8	12.8	1.7	95.3	95.8	81.3
Queue Delay	0.0	21.9	0.2	0.0	0.7	0.7	0.0
Total Delay	31.4	42.7	13.1	1.7	96.0	96.5	81.3
Queue Length 50th (ft)	142	1341	163	11	153	155	152
Queue Length 95th (ft)	m218	m1121	m745	m3	225	226	237
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	441	2616	2036	1133	344	344	369
Starvation Cap Reductn	0	605	125	0	0	0	0
Spillback Cap Reductn	0	67	84	0	65	65	1
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.04	0.75	0.49	0.45	0.46	0.50

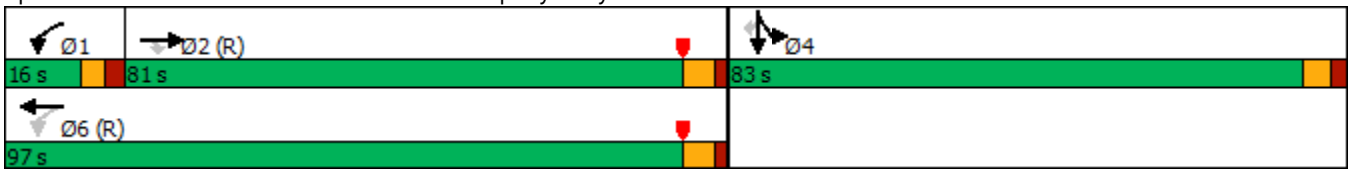
Intersection Summary

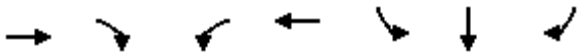
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1321	291	171	1476	885	0	751
Future Volume (vph)	1321	291	171	1476	885	0	751
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	75.6	75.6	104.5	104.0	63.5	63.5	63.5
Actuated g/C Ratio	0.42	0.42	0.58	0.58	0.35	0.35	0.35
v/c Ratio	1.05	0.37	0.69	0.85	0.79	0.79	0.78
Control Delay	75.5	5.5	55.0	28.7	61.9	62.0	53.5
Queue Delay	0.0	0.0	0.0	6.0	18.8	19.3	0.0
Total Delay	75.5	5.5	55.0	34.6	80.7	81.3	53.5
LOS	E	A	D	C	F	F	D
Approach Delay	62.8			36.8		68.4	
Approach LOS	E			D		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 55.9	Intersection LOS: E
Intersection Capacity Utilization 85.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1405	310	182	1570	470	471	799
v/c Ratio	1.05	0.37	0.69	0.85	0.79	0.79	0.78
Control Delay	75.5	5.5	55.0	28.7	61.9	62.0	53.5
Queue Delay	0.0	0.0	0.0	6.0	18.8	19.3	0.0
Total Delay	75.5	5.5	55.0	34.6	80.7	81.3	53.5
Queue Length 50th (ft)	~948	47	144	1026	525	527	451
Queue Length 95th (ft)	#1093	m71	#391	#1112	606	609	481
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1340	844	264	1846	717	717	1220
Starvation Cap Reductn	0	0	0	234	0	0	0
Spillback Cap Reductn	0	0	0	0	242	242	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.37	0.69	0.97	0.99	0.99	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

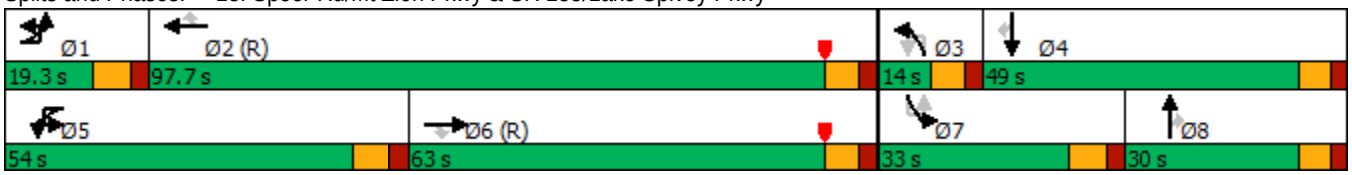
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

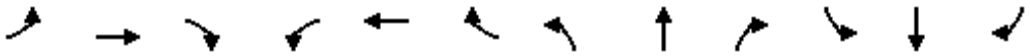
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	801	117	720	981	275	73	172	284	393	356	161
Future Volume (vph)	141	801	117	720	981	275	73	172	284	393	356	161
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	12.9	67.0	67.0	44.9	98.9	98.9	7.3	14.9	14.9	24.6	32.7	32.7
Actuated g/C Ratio	0.07	0.37	0.37	0.25	0.55	0.55	0.04	0.08	0.08	0.14	0.18	0.18
v/c Ratio	0.60	0.73	0.17	0.89	0.59	0.29	0.56	0.62	0.59	0.88	0.58	0.40
Control Delay	88.4	48.3	5.3	75.6	28.6	5.1	100.3	88.8	12.1	96.5	70.7	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	48.3	5.3	75.6	28.6	5.1	100.3	88.8	12.1	96.5	70.7	10.1
LOS	F	D	A	E	C	A	F	F	B	F	E	B
Approach Delay		48.9			42.5			49.2			71.1	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 50.6	Intersection LOS: D
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	148	843	123	758	1033	289	77	181	299	414	375	169
v/c Ratio	0.60	0.73	0.17	0.89	0.59	0.29	0.56	0.62	0.59	0.88	0.58	0.40
Control Delay	88.4	48.3	5.3	75.6	28.6	5.1	100.3	88.8	12.1	96.5	70.7	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	48.3	5.3	75.6	28.6	5.1	100.3	88.8	12.1	96.5	70.7	10.1
Queue Length 50th (ft)	87	338	11	470	372	20	46	111	0	250	215	0
Queue Length 95th (ft)	120	484	42	544	500	m59	79	153	52	#332	265	69
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	256	1158	714	911	1756	1000	140	460	622	488	833	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.73	0.17	0.83	0.59	0.29	0.55	0.39	0.48	0.85	0.45	0.34

Intersection Summary

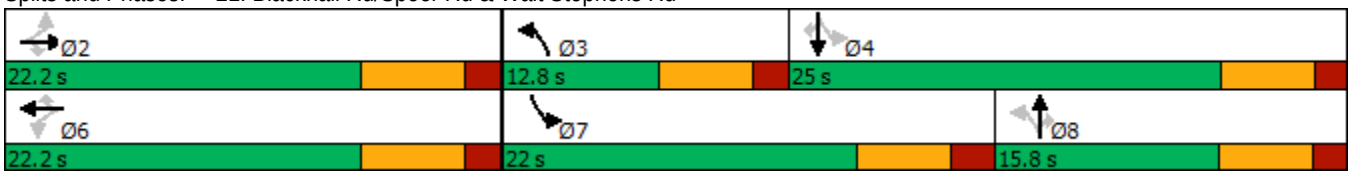
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

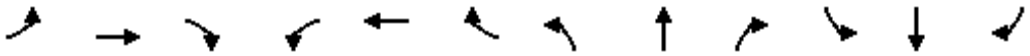
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	425	78	112	305	280	43	173	95	652	422	18
Future Volume (vph)	29	425	78	112	305	280	43	173	95	652	422	18
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	14.7	10.2	10.2	28.0	23.7	23.7
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.28	0.26	0.18	0.18	0.49	0.42	0.42
v/c Ratio	0.12	0.81	0.12	0.79	0.58	0.28	0.12	0.52	0.19	1.00	0.55	0.02
Control Delay	18.3	35.9	0.4	63.0	24.2	3.6	9.6	29.3	0.8	51.9	17.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	35.9	0.4	63.0	24.2	3.6	9.6	29.3	0.8	51.9	17.9	0.1
LOS	B	D	A	E	C	A	A	C	A	D	B	A
Approach Delay		29.7			22.2			17.9			38.0	
Approach LOS		C			C			B			D	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 56.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 29.7	Intersection LOS: C
Intersection Capacity Utilization 100.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	29	429	79	113	308	283	43	175	96	659	426	18
v/c Ratio	0.12	0.81	0.12	0.79	0.58	0.28	0.12	0.52	0.19	1.00	0.55	0.02
Control Delay	18.3	35.9	0.4	63.0	24.2	3.6	9.6	29.3	0.8	51.9	17.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	35.9	0.4	63.0	24.2	3.6	9.6	29.3	0.8	51.9	17.9	0.1
Queue Length 50th (ft)	8	147	0	38	97	0	7	59	0	164	84	0
Queue Length 95th (ft)	26	#292	0	#121	170	26	19	114	0	#359	#236	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	253	536	648	145	536	1005	350	334	512	657	804	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.80	0.12	0.78	0.57	0.28	0.12	0.52	0.19	1.00	0.53	0.02

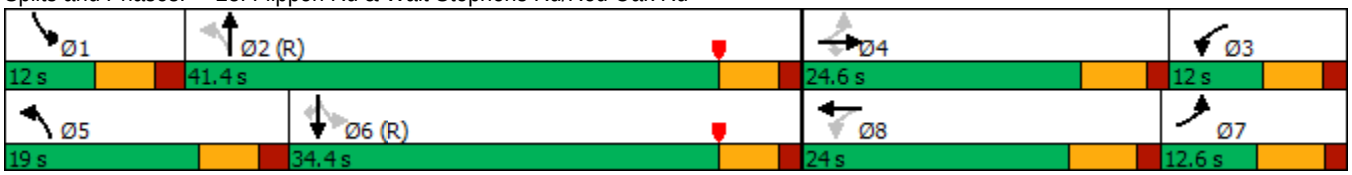
Intersection Summary

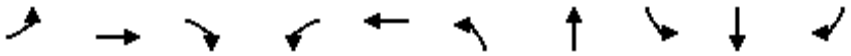
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	223	280	561	43	156	407	382	54	556	254
Future Volume (vph)	223	280	561	43	156	407	382	54	556	254
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	25.0	20.4	20.4	20.6	14.2	50.5	41.2	34.5	28.8	28.8
Actuated g/C Ratio	0.28	0.23	0.23	0.23	0.16	0.56	0.46	0.38	0.32	0.32
v/c Ratio	0.72	0.71	0.96	0.22	0.68	1.08	0.53	0.14	1.00	0.39
Control Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
LOS	D	D	D	C	D	F	B	B	E	A
Approach Delay		43.7			41.8		51.8		45.9	
Approach LOS		D			D		D		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 93.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	240	301	603	46	203	438	449	58	598	273
v/c Ratio	0.72	0.71	0.96	0.22	0.68	1.08	0.53	0.14	1.00	0.39
Control Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	43.4	44.4	25.6	45.4	94.0	10.6	12.1	67.9	4.8
Queue Length 50th (ft)	103	163	166	18	104	~247	188	15	336	0
Queue Length 95th (ft)	#190	#286	#396	41	169	m#421	m162	34	#557	53
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	339	425	628	208	372	404	845	412	601	697
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.71	0.96	0.22	0.55	1.08	0.53	0.14	1.00	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

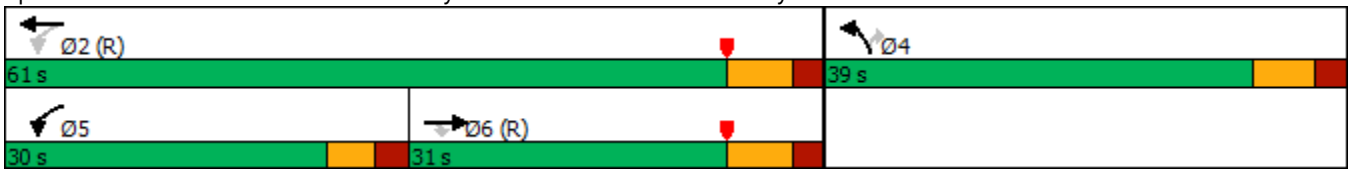
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	674	415	522	1142	489	369
Future Volume (vph)	674	415	522	1142	489	369
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	23.7	23.7	54.9	53.7	31.9	31.9
Actuated g/C Ratio	0.24	0.24	0.55	0.54	0.32	0.32
v/c Ratio	1.06	0.69	1.31	0.76	1.16	0.59
Control Delay	90.3	9.5	182.9	21.8	125.4	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.3	9.5	182.9	21.8	125.4	6.6
LOS	F	A	F	C	F	A
Approach Delay	59.5			72.3	74.3	
Approach LOS	E			E	E	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 68.9	Intersection LOS: E
Intersection Capacity Utilization 91.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	733	451	567	1241	532	401
v/c Ratio	1.06	0.69	1.31	0.76	1.16	0.59
Control Delay	90.3	9.5	182.9	21.8	125.4	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.3	9.5	182.9	21.8	125.4	6.6
Queue Length 50th (ft)	~272	0	~425	307	~402	0
Queue Length 95th (ft)	#389	95	#636	395	#605	74
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	689	652	432	1642	460	685
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.69	1.31	0.76	1.16	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	674	415	522	1142	489	369
Future Volume (veh/h)	674	415	522	1142	489	369
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	733	451	567	1241	532	401
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	695	310	444	1666	465	413
Arrive On Green	0.24	0.24	0.24	0.54	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	733	451	567	1241	532	401
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	23.7	23.7	23.9	30.9	31.9	30.5
Cycle Q Clear(g_c), s	23.7	23.7	23.9	30.9	31.9	30.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	695	310	444	1666	465	413
V/C Ratio(X)	1.05	1.45	1.28	0.74	1.14	0.97
Avail Cap(c_a), veh/h	695	310	444	1666	465	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	38.2	27.9	17.9	34.0	33.6
Incr Delay (d2), s/veh	49.3	221.5	141.5	3.1	87.9	36.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	26.1	23.9	10.3	21.5	22.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	87.4	259.6	169.4	20.9	122.0	70.0
LnGrp LOS	F	F	F	C	F	E
Approach Vol, veh/h	1184			1808	933	
Approach Delay, s/veh	153.0			67.5	99.6	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.0		39.0	30.0	31.0
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		32.9		33.9	25.9	25.7
Green Ext Time (p_c), s		14.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	100.9
HCM 6th LOS	F

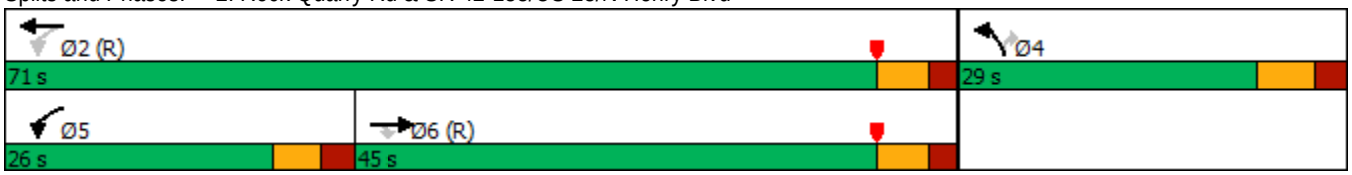
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	914	251	478	1489	196	445
Future Volume (vph)	914	251	478	1489	196	445
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	37.9	37.9	66.3	66.2	20.8	20.8
Actuated g/C Ratio	0.38	0.38	0.66	0.66	0.21	0.21
v/c Ratio	0.86	0.35	1.00	0.81	0.56	0.73
Control Delay	31.9	7.1	65.8	17.0	42.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	7.1	65.8	17.0	42.0	14.1
LOS	C	A	E	B	D	B
Approach Delay	26.6			28.9	22.6	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 27.1	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	962	264	503	1567	206	468
v/c Ratio	0.86	0.35	1.00	0.81	0.56	0.73
Control Delay	31.9	7.1	65.8	17.0	42.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	7.1	65.8	17.0	42.0	14.1
Queue Length 50th (ft)	145	2	242	335	120	39
Queue Length 95th (ft)	408	98	#486	475	190	151
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1141	777	504	1927	391	658
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.34	1.00	0.81	0.53	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	914	251	478	1489	196	445
Future Volume (veh/h)	914	251	478	1489	196	445
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	962	264	503	1567	206	468
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1152	617	461	1904	394	350
Arrive On Green	0.13	0.13	0.20	0.65	0.22	0.22
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	962	264	503	1567	206	468
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	31.7	15.4	20.0	40.2	10.2	22.1
Cycle Q Clear(g_c), s	31.7	15.4	20.0	40.2	10.2	22.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1152	617	461	1904	394	350
V/C Ratio(X)	0.83	0.43	1.09	0.82	0.52	1.34
Avail Cap(c_a), veh/h	1152	617	461	1904	394	350
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	33.3	28.6	13.2	34.3	39.0
Incr Delay (d2), s/veh	6.5	2.0	68.9	4.2	1.7	169.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	6.8	13.8	11.5	4.5	33.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.0	35.3	97.4	17.4	36.0	208.4
LnGrp LOS	D	D	F	B	D	F
Approach Vol, veh/h	1226			2070	674	
Approach Delay, s/veh	44.5			36.8	155.7	
Approach LOS	D			D	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.0		29.0	26.0	45.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s		42.2		24.1	22.0	33.7
Green Ext Time (p_c), s		19.8		0.0	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	59.4
HCM 6th LOS	E

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1160	10	1693	11	3
Future Volume (vph)	1160	10	1693	11	3
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	87.0	87.0	87.0	13.0	13.0
Total Split (%)	87.0%	87.0%	87.0%	13.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	92.3	92.3	92.3	6.1	6.1
Actuated g/C Ratio	0.92	0.92	0.92	0.06	0.06
v/c Ratio	0.44	0.03	0.64	0.10	0.03
Control Delay	3.5	1.8	5.2	46.1	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.5	1.8	5.2	46.1	29.7
LOS	A	A	A	D	C
Approach Delay	3.5		5.2	42.6	
Approach LOS	A		A	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 4.7	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1194	10	1728	11	3
v/c Ratio	0.44	0.03	0.64	0.10	0.03
Control Delay	3.5	1.8	5.2	46.1	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.5	1.8	5.2	46.1	29.7
Queue Length 50th (ft)	0	0	0	7	0
Queue Length 95th (ft)	m197	m2	596	25	9
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2710	397	2709	123	113
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.44	0.03	0.64	0.09	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1160	10	10	1693	11	3
Future Volume (veh/h)	1160	10	10	1693	11	3
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	1184	10	10	1728	11	3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2589	22	475	2547	29	26
Arrive On Green	1.00	1.00	1.00	1.00	0.02	0.02
Sat Flow, veh/h	3088	25	469	3040	1781	1585
Grp Volume(v), veh/h	583	611	10	1728	11	3
Grp Sat Flow(s),veh/h/ln	1481	1555	469	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.6	0.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.6	0.2
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1274	1337	475	2547	29	26
V/C Ratio(X)	0.46	0.46	0.02	0.68	0.38	0.12
Avail Cap(c_a), veh/h	1274	1337	475	2547	125	111
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.53	0.53	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	48.7	48.5
Incr Delay (d2), s/veh	0.9	0.9	0.0	0.8	8.2	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.3	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.9	0.0	0.8	56.9	50.5
LnGrp LOS	A	A	A	A	E	D
Approach Vol, veh/h	1194			1738	14	
Approach Delay, s/veh	0.9			0.8	55.5	
Approach LOS	A			A	E	

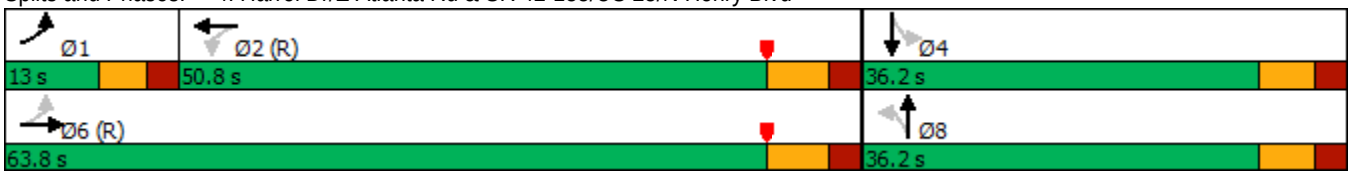
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		92.4		7.6		92.4
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		80.6		7.0		80.6
Max Q Clear Time (g_c+I1), s		2.0		2.6		2.0
Green Ext Time (p_c), s		53.2		0.0		26.9

Intersection Summary	
HCM 6th Ctrl Delay	1.1
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	216	843	21	1466	80	37	314	7
Future Volume (vph)	216	843	21	1466	80	37	314	7
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	13.0	63.8	50.8	50.8	36.2	36.2	36.2	36.2
Total Split (%)	13.0%	63.8%	50.8%	50.8%	36.2%	36.2%	36.2%	36.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	57.8	56.7	43.7	43.7		29.5		29.5
Actuated g/C Ratio	0.58	0.57	0.44	0.44		0.30		0.30
v/c Ratio	1.29	0.57	0.09	1.39		0.46		1.50
Control Delay	177.9	9.7	24.5	205.1		28.6		266.9
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	177.9	9.7	24.5	205.1		28.6		266.9
LOS	F	A	C	F		C		F
Approach Delay		41.4		202.9		28.6		266.9
Approach LOS		D		F		C		F

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay: 149.9	Intersection LOS: F
Intersection Capacity Utilization 110.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





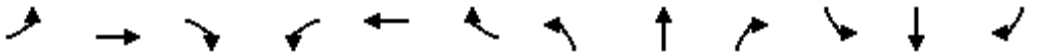
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	225	970	22	1770	190	494
v/c Ratio	1.29	0.57	0.09	1.39	0.46	1.50
Control Delay	177.9	9.7	24.5	205.1	28.6	266.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	177.9	9.7	24.5	205.1	28.6	266.9
Queue Length 50th (ft)	~134	232	8	~781	83	~432
Queue Length 95th (ft)	m#205	m232	m18	#965	151	#633
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	174	1688	240	1277	413	330
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.29	0.57	0.09	1.39	0.46	1.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	843	88	21	1466	233	80	37	65	314	7	154
Future Volume (veh/h)	216	843	88	21	1466	233	80	37	65	314	7	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	225	878	92	22	1527	243	83	39	68	327	7	160
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	182	1549	162	282	1122	175	232	114	164	319	6	127
Arrive On Green	0.07	0.57	0.57	0.14	0.14	0.14	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1570	2731	286	579	2567	401	610	385	555	879	19	430
Grp Volume(v), veh/h	225	481	489	22	869	901	190	0	0	494	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1522	579	1481	1487	1549	0	0	1328	0	0
Q Serve(g_s), s	7.0	20.5	20.5	3.4	43.7	43.7	0.0	0.0	0.0	19.9	0.0	0.0
Cycle Q Clear(g_c), s	7.0	20.5	20.5	10.9	43.7	43.7	9.6	0.0	0.0	29.5	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.27	0.44		0.36	0.66		0.32
Lane Grp Cap(c), veh/h	182	848	863	282	647	650	509	0	0	452	0	0
V/C Ratio(X)	1.24	0.57	0.57	0.08	1.34	1.39	0.37	0.00	0.00	1.09	0.00	0.00
Avail Cap(c_a), veh/h	182	848	863	282	647	650	509	0	0	452	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.73	0.73	0.73	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	13.8	13.8	32.1	42.8	42.8	28.1	0.0	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	128.2	1.4	1.4	0.4	161.9	180.7	0.5	0.0	0.0	70.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	6.6	6.8	0.6	46.3	49.9	3.7	0.0	0.0	19.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	154.6	15.2	15.2	32.5	204.7	223.5	28.6	0.0	0.0	107.6	0.0	0.0
LnGrp LOS	F	B	B	C	F	F	C	A	A	F	A	A
Approach Vol, veh/h		1195			1792			190			494	
Approach Delay, s/veh		41.4			212.1			28.6			107.6	
Approach LOS		D			F			C			F	

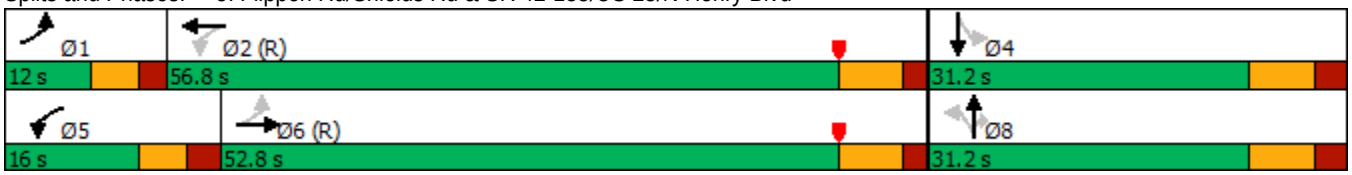
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.0	50.8		36.2		63.8		36.2				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	7.0	43.7		29.5		56.7		29.5				
Max Q Clear Time (g_c+I1), s	9.0	45.7		31.5		22.5		11.6				
Green Ext Time (p_c), s	0.0	0.0		0.0		14.6		1.1				

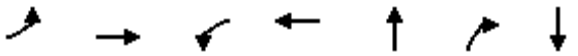
Intersection Summary			
HCM 6th Ctrl Delay		133.0	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	5	964	211	1700	259	18	216	30	52
Future Volume (vph)	5	964	211	1700	259	18	216	30	52
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	53.7	46.6	62.7	60.0		23.6	23.6		23.6
Actuated g/C Ratio	0.54	0.47	0.63	0.60		0.24	0.24		0.24
v/c Ratio	0.03	0.86	0.77	1.01		0.95	0.50		0.37
Control Delay	7.6	31.7	23.7	24.4		78.6	22.3		32.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	7.6	31.7	23.7	24.4		78.6	22.3		32.4
LOS	A	C	C	C		E	C		C
Approach Delay		31.6		24.3		54.0			32.4
Approach LOS		C		C		D			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 30.8	Intersection LOS: C
Intersection Capacity Utilization 90.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd



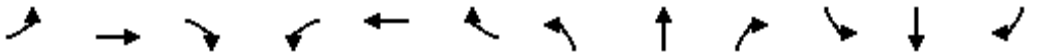


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	5	1146	222	1797	292	227	110
v/c Ratio	0.03	0.86	0.77	1.01	0.95	0.50	0.37
Control Delay	7.6	31.7	23.7	24.4	78.6	22.3	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	31.7	23.7	24.4	78.6	22.3	32.4
Queue Length 50th (ft)	1	330	43	609	183	67	52
Queue Length 95th (ft)	5	#442	m28	m480	#346	142	104
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	189	1333	293	1773	311	453	304
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.86	0.76	1.01	0.94	0.50	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	964	124	211	1700	8	259	18	216	30	52	22
Future Volume (veh/h)	5	964	124	211	1700	8	259	18	216	30	52	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1015	131	222	1789	8	273	19	227	32	55	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	86	1240	160	284	1701	8	211	10	377	46	68	18
Arrive On Green	0.01	0.48	0.48	0.08	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2589	334	1753	3053	14	593	41	1585	0	287	76
Grp Volume(v), veh/h	5	569	577	222	876	921	292	0	227	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1469	1753	1495	1572	635	0	1585	363	0	0
Q Serve(g_s), s	0.1	33.6	33.6	6.1	55.7	55.7	0.0	0.0	12.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	33.6	33.6	6.1	55.7	55.7	23.8	0.0	12.7	23.8	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.01	0.93		1.00	0.29		0.21
Lane Grp Cap(c), veh/h	86	696	704	284	833	876	221	0	377	133	0	0
V/C Ratio(X)	0.06	0.82	0.82	0.78	1.05	1.05	1.32	0.00	0.60	0.83	0.00	0.00
Avail Cap(c_a), veh/h	186	696	704	316	833	876	221	0	377	133	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.7	22.3	22.3	20.3	22.1	22.1	41.9	0.0	33.9	33.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	10.3	10.3	1.1	26.4	26.7	173.5	0.0	4.0	36.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.2	12.4	2.5	23.4	24.7	16.1	0.0	5.2	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	32.6	32.6	21.4	48.6	48.9	215.3	0.0	37.9	69.4	0.0	0.0
LnGrp LOS	C	C	C	C	F	F	F	A	D	E	A	A
Approach Vol, veh/h		1151			2019			519			110	
Approach Delay, s/veh		32.6			45.7			137.7			69.4	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	62.4		31.2	14.2	54.6		31.2				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	57.7		25.8	8.1	35.6		25.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	7.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			55.0									
HCM 6th LOS			D									

Intersection	
Int Delay, s/veh	44.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	3	86	12	3	16	111	1759	25	9	851	33
Future Vol, veh/h	34	3	86	12	3	16	111	1759	25	9	851	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	36	3	91	13	3	17	117	1852	26	9	896	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2094	3044	466	2554	3035	926	931	0	0	1878	0	0
Stage 1	932	932	-	2086	2086	-	-	-	-	-	-	-
Stage 2	1162	2112	-	468	949	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 30	12	543	13	13	271	731	-	-	316	-	-
Stage 1	287	343	-	54	93	-	-	-	-	-	-	-
Stage 2	207	90	-	545	337	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 19	10	543	~ 7	11	271	731	-	-	316	-	-
Mov Cap-2 Maneuver	~ 19	10	-	~ 7	11	-	-	-	-	-	-	-
Stage 1	241	333	-	45	78	-	-	-	-	-	-	-
Stage 2	156	76	-	437	328	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 777.8	$ 1061.6	0.6	0.2
HCM LOS	F	F		

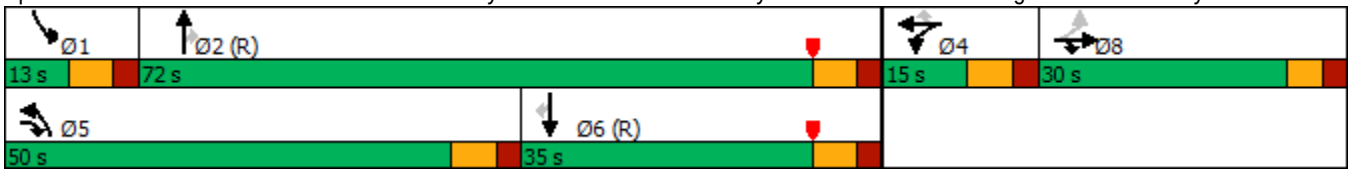
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	731	-	-	55	15	316	-	-
HCM Lane V/C Ratio	0.16	-	-	2.354	2.175	0.03	-	-
HCM Control Delay (s)	10.9	-	-	$ 777.8	$ 1061.6	16.7	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	-	13	4.8	0.1	-	-

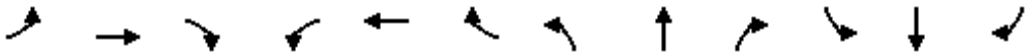
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	78	535	41	62	51	1013	699	45	25	323	214
Future Volume (vph)	119	78	535	41	62	51	1013	699	45	25	323	214
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	30.0	30.0		15.0	15.0	15.0	50.0	72.0	72.0	13.0	35.0	35.0
Total Split (%)	23.1%	23.1%		11.5%	11.5%	11.5%	38.5%	55.4%	55.4%	10.0%	26.9%	26.9%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	21.1	21.1	77.1	9.0	9.0	9.0	49.3	74.8	74.8	7.4	27.0	27.0
Actuated g/C Ratio	0.16	0.16	0.59	0.07	0.07	0.07	0.38	0.58	0.58	0.06	0.21	0.21
v/c Ratio	0.66	0.27	0.39	0.35	0.51	0.18	0.93	0.44	0.05	0.26	0.55	0.48
Control Delay	48.7	30.6	14.9	66.2	72.5	1.4	54.4	19.5	0.1	66.0	50.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	30.6	14.9	66.2	72.5	1.4	54.4	19.5	0.1	66.0	50.6	9.1
LOS	D	C	B	E	E	A	D	B	A	E	D	A
Approach Delay		22.1			47.4			39.1			35.4	
Approach LOS		C			D			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 35.0	Intersection LOS: C
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy



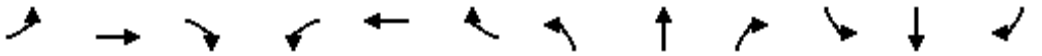


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	124	81	557	43	65	53	1055	728	47	26	336	223
v/c Ratio	0.66	0.27	0.39	0.35	0.51	0.18	0.93	0.44	0.05	0.26	0.55	0.48
Control Delay	48.7	30.6	14.9	66.2	72.5	1.4	54.4	19.5	0.1	66.0	50.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	30.6	14.9	66.2	72.5	1.4	54.4	19.5	0.1	66.0	50.6	9.1
Queue Length 50th (ft)	103	61	203	35	53	0	~469	225	0	21	139	0
Queue Length 95th (ft)	142	78	280	76	#113	0	#636	265	0	54	184	69
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	214	343	1435	122	128	293	1133	1689	984	101	670	487
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.24	0.39	0.35	0.51	0.18	0.93	0.43	0.05	0.26	0.50	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	78	535	41	62	51	1013	699	45	25	323	214
Future Volume (veh/h)	119	78	535	41	62	51	1013	699	45	25	323	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	124	81	557	43	65	53	1055	728	47	26	336	223
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	261	310	1225	109	115	97	1012	1565	853	50	696	328
Arrive On Green	0.05	0.05	0.05	0.06	0.06	0.06	0.33	0.54	0.54	0.03	0.23	0.23
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	124	81	557	43	65	53	1055	728	47	26	336	223
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	10.0	5.4	18.1	3.0	4.4	4.2	43.2	20.1	1.8	1.9	12.7	18.9
Cycle Q Clear(g_c), s	10.0	5.4	18.1	3.0	4.4	4.2	43.2	20.1	1.8	1.9	12.7	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	310	1225	109	115	97	1012	1565	853	50	696	328
V/C Ratio(X)	0.48	0.26	0.45	0.39	0.57	0.54	1.04	0.47	0.06	0.52	0.48	0.68
Avail Cap(c_a), veh/h	290	345	1271	110	115	98	1012	1565	853	84	696	328
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	53.8	23.7	58.7	59.3	59.2	43.4	18.5	14.3	62.3	42.9	45.3
Incr Delay (d2), s/veh	1.5	0.5	0.3	2.8	7.1	7.0	40.0	1.0	0.1	21.1	2.4	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.6	5.9	1.5	2.3	1.9	21.2	6.6	0.7	1.1	4.8	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	54.3	24.0	61.4	66.4	66.2	83.4	19.5	14.4	83.4	45.3	56.1
LnGrp LOS	E	D	C	E	E	E	F	B	B	F	D	E
Approach Vol, veh/h		762			161			1830			585	
Approach Delay, s/veh		32.7			65.0			56.2			51.1	
Approach LOS		C			E			E			D	

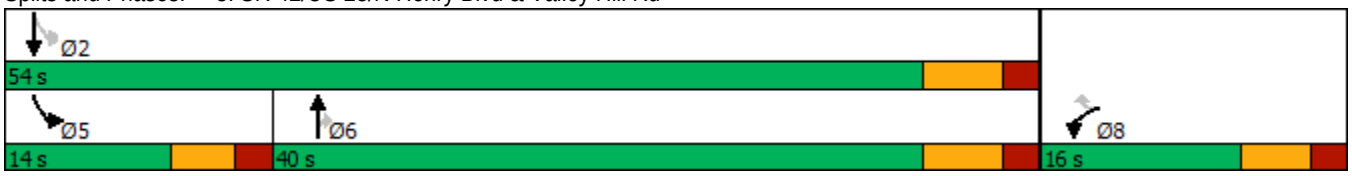
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	76.9		15.0	50.0	37.4		27.6				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	6.1	65.1		8.0	43.2	28.1		24.0				
Max Q Clear Time (g_c+I1), s	3.9	22.1		6.4	45.2	20.9		20.1				
Green Ext Time (p_c), s	0.0	11.5		0.1	0.0	2.8		1.5				

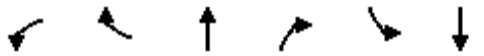
Intersection Summary			
HCM 6th Ctrl Delay		50.4	
HCM 6th LOS		D	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	302	840	36	162	420
Future Volume (vph)	102	302	840	36	162	420
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	40.0	40.0	14.0	54.0
Total Split (%)	22.9%	22.9%	57.1%	57.1%	20.0%	77.1%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.5	10.5	26.6	26.6	37.9	37.1
Actuated g/C Ratio	0.18	0.18	0.44	0.44	0.63	0.62
v/c Ratio	0.35	0.61	0.68	0.05	0.38	0.24
Control Delay	28.8	10.5	16.8	3.9	6.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	10.5	16.8	3.9	6.4	5.0
LOS	C	B	B	A	A	A
Approach Delay	15.1		16.3			5.4
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 59.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	107	318	884	38	171	442
v/c Ratio	0.35	0.61	0.68	0.05	0.38	0.24
Control Delay	28.8	10.5	16.8	3.9	6.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	10.5	16.8	3.9	6.4	5.0
Queue Length 50th (ft)	37	7	137	0	20	30
Queue Length 95th (ft)	87	76	197	14	38	46
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	318	529	1718	942	453	2336
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.60	0.51	0.04	0.38	0.19

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	102	302	840	36	162	420
Future Volume (veh/h)	102	302	840	36	162	420
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	107	0	884	38	171	442
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	251		1290	690	471	1945
Arrive On Green	0.14	0.00	0.44	0.44	0.13	0.66
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	107	0	884	38	171	442
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	3.2	0.0	14.0	0.8	2.5	3.5
Cycle Q Clear(g_c), s	3.2	0.0	14.0	0.8	2.5	3.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	251		1290	690	471	1945
V/C Ratio(X)	0.43		0.69	0.06	0.36	0.23
Avail Cap(c_a), veh/h	318		1716	918	504	2427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	13.2	9.5	8.3	4.0
Incr Delay (d2), s/veh	1.1	0.0	1.4	0.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	3.8	0.2	0.6	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.0	0.0	14.7	9.6	8.7	4.2
LnGrp LOS	C		B	A	A	A
Approach Vol, veh/h	107	A	922			613
Approach Delay, s/veh	24.0		14.5			5.4
Approach LOS	C		B			A

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		44.5			12.9	31.6	13.8
Change Period (Y+Rc), s		6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s		47.8			8.6	33.8	10.4
Max Q Clear Time (g_c+I1), s		5.5			4.5	16.0	5.2
Green Ext Time (p_c), s		6.0			0.2	9.4	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	809	23	1341	4	55	1	22	1	1	5
Future Volume (vph)	2	809	23	1341	4	55	1	22	1	1	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	14.0	92.0	14.0	92.0	92.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	70.8%	10.8%	70.8%	70.8%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	105.3	102.0	107.8	106.8	106.8		11.3	11.3		11.3	11.3
Actuated g/C Ratio	0.81	0.78	0.83	0.82	0.82		0.09	0.09		0.09	0.09
v/c Ratio	0.01	0.37	0.05	0.56	0.00		0.50	0.11		0.01	0.02
Control Delay	1.0	1.7	2.1	9.9	0.0		70.3	1.0		52.0	0.2
Queue Delay	0.0	0.1	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	1.0	1.8	2.1	9.9	0.0		70.3	1.0		52.0	0.2
LOS	A	A	A	A	A		E	A		D	A
Approach Delay		1.8		9.8			50.9			15.0	
Approach LOS		A		A			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 36 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 67.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd

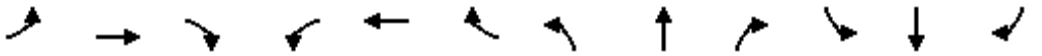




Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2	904	24	1412	4	59	23	2	5
v/c Ratio	0.01	0.37	0.05	0.56	0.00	0.50	0.11	0.01	0.02
Control Delay	1.0	1.7	2.1	9.9	0.0	70.3	1.0	52.0	0.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.0	1.8	2.1	9.9	0.0	70.3	1.0	52.0	0.2
Queue Length 50th (ft)	0	23	1	31	0	48	0	2	0
Queue Length 95th (ft)	m0	11	m7	m659	m0	93	0	10	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	344	2419	530	2534	1315	176	276	204	276
Starvation Cap Reductn	0	285	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	66	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.42	0.05	0.57	0.00	0.34	0.08	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	809	49	23	1341	4	55	1	22	1	1	5
Future Volume (veh/h)	2	809	49	23	1341	4	55	1	22	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	852	52	24	1412	4	58	1	23	1	1	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	324	2076	127	530	2240	1134	55	0	206	42	29	206
Arrive On Green	0.01	1.00	1.00	0.05	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	2998	183	1781	3131	1585	0	4	1585	0	221	1585
Grp Volume(v), veh/h	2	445	459	24	1412	4	59	0	23	2	0	5
Grp Sat Flow(s),veh/h/ln	1781	1566	1615	1781	1566	1585	4	0	1585	221	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.5	0.0	0.0	16.9	0.0	1.7	16.9	0.0	0.4
Prop In Lane	1.00		0.11	1.00		1.00	0.98		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	324	1084	1118	530	2240	1134	55	0	206	70	0	206
V/C Ratio(X)	0.01	0.41	0.41	0.05	0.63	0.00	1.06	0.00	0.11	0.03	0.00	0.02
Avail Cap(c_a), veh/h	430	1084	1118	596	2240	1134	55	0	206	70	0	206
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.44	0.44	0.44	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	0.0	0.0	5.1	0.0	0.0	64.8	0.0	49.9	50.1	0.0	49.4
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.0	0.6	0.0	140.2	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.2	0.2	0.0	4.0	0.0	0.7	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.0	1.0	1.0	5.1	0.6	0.0	205.0	0.0	50.2	50.3	0.0	49.4
LnGrp LOS	A	A	A	A	A	A	F	A	D	D	A	D
Approach Vol, veh/h		906			1440			82			7	
Approach Delay, s/veh		1.0			0.7			161.6			49.6	
Approach LOS		A			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	96.8		24.0	6.2	99.8		24.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 8.3	* 85		16.9	* 8.2	* 85		16.9				
Max Q Clear Time (g_c+I1), s	2.5	2.0		18.9	2.0	2.0		18.9				
Green Ext Time (p_c), s	0.0	15.2		0.0	0.0	36.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		6.4	
HCM 6th LOS		A	

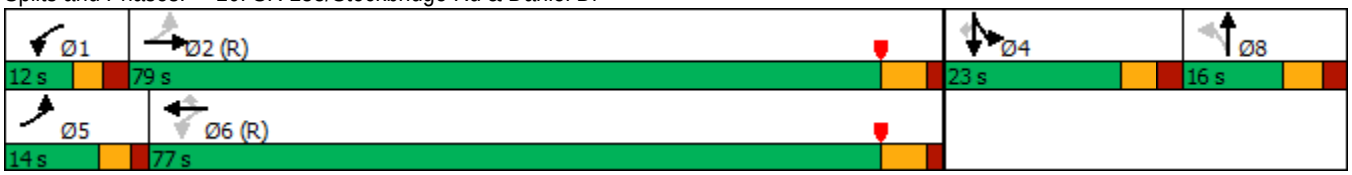
Notes

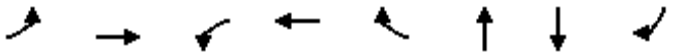
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	118	843	11	1371	40	14	4	7	185
Future Volume (vph)	118	843	11	1371	40	14	4	7	185
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	14.0	79.0	12.0	77.0	77.0	16.0	16.0	23.0	23.0
Total Split (%)	10.8%	60.8%	9.2%	59.2%	59.2%	12.3%	12.3%	17.7%	17.7%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	99.3	94.1	92.6	85.7	85.7		8.5	9.9	9.9
Actuated g/C Ratio	0.76	0.72	0.71	0.66	0.66		0.07	0.08	0.08
v/c Ratio	0.46	0.43	0.02	0.69	0.04		0.24	0.38	0.64
Control Delay	25.0	3.6	3.4	9.9	0.1		52.9	64.3	18.0
Queue Delay	0.0	0.0	0.0	1.3	0.0		0.0	0.0	0.3
Total Delay	25.0	3.6	3.4	11.2	0.1		52.9	64.3	18.3
LOS	C	A	A	B	A		D	E	B
Approach Delay		6.2		10.8			52.9	28.0	
Approach LOS		A		B			D	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 71.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr

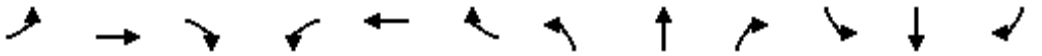




Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	122	899	11	1413	41	24	51	191
v/c Ratio	0.46	0.43	0.02	0.69	0.04	0.24	0.38	0.64
Control Delay	25.0	3.6	3.4	9.9	0.1	52.9	64.3	18.0
Queue Delay	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.3
Total Delay	25.0	3.6	3.4	11.2	0.1	52.9	64.3	18.3
Queue Length 50th (ft)	28	57	1	623	0	15	42	0
Queue Length 95th (ft)	m85	46	m2	123	m0	44	83	73
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	282	2077	465	2034	1086	112	233	373
Starvation Cap Reductn	0	109	0	32	0	0	0	0
Spillback Cap Reductn	0	0	0	389	0	0	0	23
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.46	0.02	0.86	0.04	0.21	0.22	0.55

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	843	29	11	1371	40	14	4	6	43	7	185
Future Volume (veh/h)	118	843	29	11	1371	40	14	4	6	43	7	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	869	30	11	1413	41	14	4	6	44	7	191
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	358	1797	62	458	1899	961	36	10	16	202	32	207
Arrive On Green	0.09	1.00	1.00	0.03	1.00	1.00	0.04	0.04	0.04	0.13	0.13	0.13
Sat Flow, veh/h	1781	2838	98	1781	3131	1585	1016	290	435	1547	246	1585
Grp Volume(v), veh/h	122	441	458	11	1413	41	24	0	0	51	0	191
Grp Sat Flow(s),veh/h/ln	1781	1439	1497	1781	1566	1585	1741	0	0	1793	0	1585
Q Serve(g_s), s	3.4	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	3.3	0.0	15.5
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	3.3	0.0	15.5
Prop In Lane	1.00		0.07	1.00		1.00	0.58		0.25	0.86		1.00
Lane Grp Cap(c), veh/h	358	911	948	458	1899	961	62	0	0	234	0	207
V/C Ratio(X)	0.34	0.48	0.48	0.02	0.74	0.04	0.39	0.00	0.00	0.22	0.00	0.92
Avail Cap(c_a), veh/h	400	911	948	520	1899	961	130	0	0	234	0	207
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.81	0.81	0.81	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	0.0	9.2	0.0	0.0	61.3	0.0	0.0	50.5	0.0	55.8
Incr Delay (d2), s/veh	0.4	1.4	1.3	0.0	2.2	0.1	3.9	0.0	0.0	0.5	0.0	41.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.4	0.1	0.6	0.0	0.8	0.0	0.0	1.5	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	1.4	1.3	9.2	2.2	0.1	65.2	0.0	0.0	51.0	0.0	97.1
LnGrp LOS	A	A	A	A	A	A	E	A	A	D	A	F
Approach Vol, veh/h		1021			1465			24			242	
Approach Delay, s/veh		2.2			2.2			65.2			87.4	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	88.6		23.0	10.9	85.1		10.9				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 73		17.0	9.0	* 71		9.7				
Max Q Clear Time (g_c+I1), s	2.3	2.0		17.5	5.4	2.0		3.8				
Green Ext Time (p_c), s	0.0	15.0		0.0	0.1	34.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		10.2	
HCM 6th LOS		B	

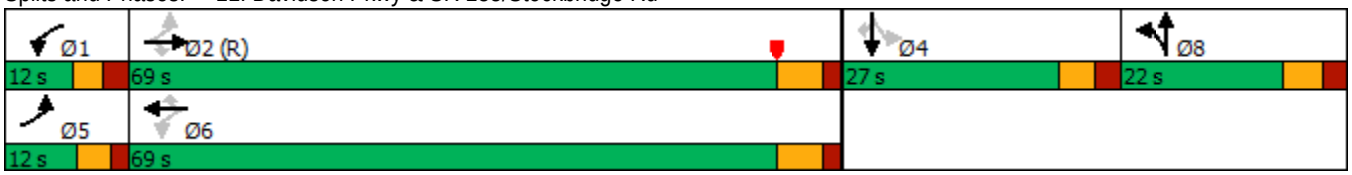
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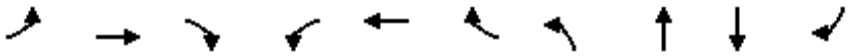
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	938	240	16	1457	53	305	11	20	12	95
Future Volume (vph)	76	938	240	16	1457	53	305	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	22.0	22.0	27.0	27.0	27.0
Total Split (%)	9.2%	53.1%	53.1%	9.2%	53.1%	53.1%	16.9%	16.9%	20.8%	20.8%	20.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	78.2	74.1	74.1	74.0	67.1	67.1	16.4	16.4		16.2	16.2
Actuated g/C Ratio	0.60	0.57	0.57	0.57	0.52	0.52	0.13	0.13		0.12	0.12
v/c Ratio	0.53	0.60	0.26	0.06	1.04	0.06	0.84	0.82		0.74	0.32
Control Delay	27.8	28.5	7.6	6.2	60.6	0.2	86.5	82.5		123.8	6.6
Queue Delay	0.0	0.2	0.0	0.0	24.8	0.0	0.0	0.0		0.0	0.0
Total Delay	27.8	28.7	7.6	6.2	85.4	0.2	86.5	82.5		123.8	6.7
LOS	C	C	A	A	F	A	F	F		F	A
Approach Delay		24.6			81.6			84.5		36.4	
Approach LOS		C			F			F		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 58.1	Intersection LOS: E
Intersection Capacity Utilization 75.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





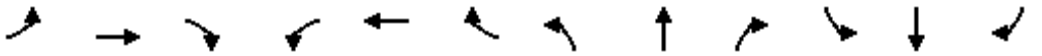
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	987	253	17	1534	56	177	173	34	100
v/c Ratio	0.53	0.60	0.26	0.06	1.04	0.06	0.84	0.82	0.74	0.32
Control Delay	27.8	28.5	7.6	6.2	60.6	0.2	86.5	82.5	123.8	6.6
Queue Delay	0.0	0.2	0.0	0.0	24.8	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	28.7	7.6	6.2	85.4	0.2	86.5	82.5	123.8	6.7
Queue Length 50th (ft)	34	392	46	1	~796	0	152	146	28	0
Queue Length 95th (ft)	m66	469	150	m4	#906	m1	#297	#286	#80	30
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	153	1633	987	311	1477	876	216	217	60	362
Starvation Cap Reductn	0	149	0	0	38	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	171	0	0	0	0	7
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.67	0.26	0.05	1.17	0.06	0.82	0.80	0.57	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	938	240	16	1457	53	305	11	16	20	12	95
Future Volume (veh/h)	76	938	240	16	1457	53	305	11	16	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	987	0	17	1534	56	345	0	0	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	320	1734		426	1681	926	399	210	0	88	55	125
Arrive On Green	0.09	1.00	0.00	0.04	1.00	1.00	0.11	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1121	694	1585
Grp Volume(v), veh/h	80	987	0	17	1534	56	345	0	0	34	0	100
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1814	0	1585
Q Serve(g_s), s	2.3	0.0	0.0	0.5	0.0	0.0	12.4	0.0	0.0	2.3	0.0	8.1
Cycle Q Clear(g_c), s	2.3	0.0	0.0	0.5	0.0	0.0	12.4	0.0	0.0	2.3	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.62		1.00
Lane Grp Cap(c), veh/h	320	1734		426	1681	926	399	210	0	143	0	125
V/C Ratio(X)	0.25	0.57		0.04	0.91	0.06	0.86	0.00	0.00	0.24	0.00	0.80
Avail Cap(c_a), veh/h	339	1734		478	1681	926	430	226	0	293	0	256
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00	0.67	0.67	0.67	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	0.0	0.0	10.0	0.0	0.0	56.7	0.0	0.0	56.2	0.0	58.9
Incr Delay (d2), s/veh	0.3	1.1	0.0	0.0	5.9	0.0	15.7	0.0	0.0	0.8	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.3	0.0	0.2	1.4	0.0	6.5	0.0	0.0	1.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	1.1	0.0	10.0	5.9	0.0	72.5	0.0	0.0	57.1	0.0	70.0
LnGrp LOS	A	A		B	A	A	E	A	A	E	A	E
Approach Vol, veh/h		1067	A		1607			345			134	
Approach Delay, s/veh		1.8			5.7			72.5			66.7	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	84.6		16.2	10.7	82.2		20.9				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 63		21.0	7.0	* 63		15.7				
Max Q Clear Time (g_c+I1), s	2.5	2.0		10.1	4.3	2.0		14.4				
Green Ext Time (p_c), s	0.0	18.3		0.3	0.0	37.1		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		14.3
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

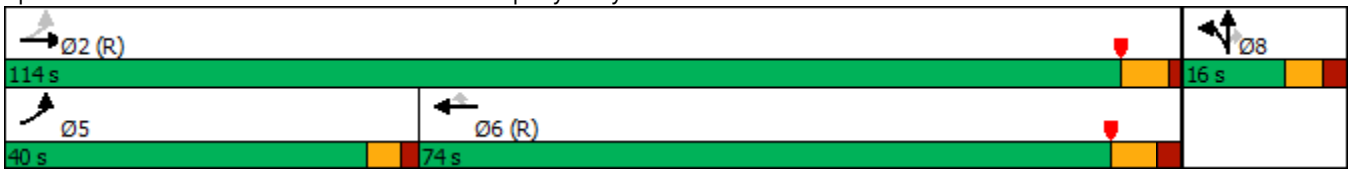
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	622	1106	1502	409	0	162
Future Volume (vph)	622	1106	1502	409	0	162
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	109.9	108.9	67.0	67.0	9.0	9.0
Actuated g/C Ratio	0.85	0.84	0.52	0.52	0.07	0.07
v/c Ratio	1.24	0.50	1.11	0.47	0.43	0.67
Control Delay	136.3	8.0	70.1	2.5	68.8	24.2
Queue Delay	0.0	0.1	0.2	0.8	0.9	0.8
Total Delay	136.3	8.1	70.3	3.3	69.8	25.0
LOS	F	A	E	A	E	C
Approach Delay		54.2	56.0		35.2	
Approach LOS		D	E		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 54.1	Intersection LOS: D
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





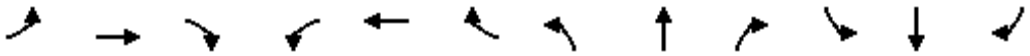
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	676	1202	1633	445	52	176
v/c Ratio	1.24	0.50	1.11	0.47	0.43	0.67
Control Delay	136.3	8.0	70.1	2.5	68.8	24.2
Queue Delay	0.0	0.1	0.2	0.8	0.9	0.8
Total Delay	136.3	8.1	70.3	3.3	69.8	25.0
Queue Length 50th (ft)	~656	300	~814	29	43	11
Queue Length 95th (ft)	m#611	m265	m#809	m30	87	86
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	546	2400	1476	953	134	271
Starvation Cap Reductn	0	0	86	249	0	0
Spillback Cap Reductn	0	245	41	0	15	13
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.24	0.56	1.17	0.63	0.44	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	622	1106	0	0	1502	409	48	0	162	0	0	0
Future Volume (veh/h)	622	1106	0	0	1502	409	48	0	162	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	676	1202	0	0	1633	445	52	0	176			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	535	2369	0	0	1483	817	136	0	121			
Arrive On Green	0.54	1.00	0.00	0.00	0.52	0.52	0.08	0.00	0.08			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	676	1202	0	0	1633	445	52	0	176			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	35.0	0.0	0.0	0.0	67.0	24.6	3.6	0.0	9.9			
Cycle Q Clear(g_c), s	35.0	0.0	0.0	0.0	67.0	24.6	3.6	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	535	2369	0	0	1483	817	136	0	121			
V/C Ratio(X)	1.26	0.51	0.00	0.00	1.10	0.54	0.38	0.00	1.46			
Avail Cap(c_a), veh/h	535	2391	0	0	1483	817	136	0	121			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.14	0.14	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	0.0	0.0	0.0	31.5	21.2	57.1	0.0	60.1			
Incr Delay (d2), s/veh	120.1	0.1	0.0	0.0	47.2	0.4	1.8	0.0	245.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	26.4	0.0	0.0	0.0	31.0	8.7	1.6	0.0	12.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	145.6	0.1	0.0	0.0	78.7	21.6	58.9	0.0	306.0			
LnGrp LOS	F	A	A	A	F	C	E	A	F			
Approach Vol, veh/h		1878			2078			228				
Approach Delay, s/veh		52.4			66.5			249.6				
Approach LOS		D			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			40.0	74.0		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			37.0	69.0		11.9				
Green Ext Time (p_c), s		28.7			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	70.2
HCM 6th LOS	E

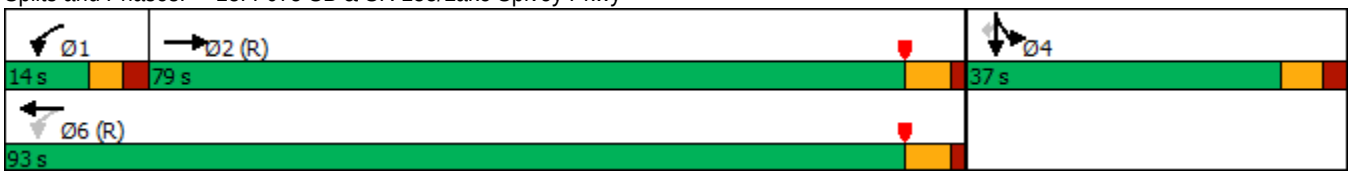
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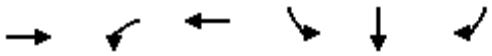
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1527	152	1406	218	0	604
Future Volume (vph)	1527	152	1406	218	0	604
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	73.1	87.1	87.1	30.5	30.5	30.5
Actuated g/C Ratio	0.56	0.67	0.67	0.23	0.23	0.23
v/c Ratio	1.09	0.99	0.81	0.30	0.30	1.02
Control Delay	70.0	66.5	6.3	43.6	43.6	88.5
Queue Delay	0.0	0.0	11.4	0.0	0.0	0.0
Total Delay	70.0	66.5	17.7	43.6	43.6	88.5
LOS	E	E	B	D	D	F
Approach Delay	70.0		22.4		76.6	
Approach LOS	E		C		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 52.8	Intersection LOS: D
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





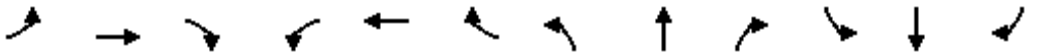
Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1770	167	1545	120	120	664
v/c Ratio	1.09	0.99	0.81	0.30	0.30	1.02
Control Delay	70.0	66.5	6.3	43.6	43.6	88.5
Queue Delay	0.0	0.0	11.4	0.0	0.0	0.0
Total Delay	70.0	66.5	17.7	43.6	43.6	88.5
Queue Length 50th (ft)	~866	83	3	88	88	~327
Queue Length 95th (ft)	#1015	m74	m3	149	149	#468
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1617	168	1919	394	394	653
Starvation Cap Reductn	0	0	258	0	0	0
Spillback Cap Reductn	0	0	374	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.99	1.00	0.30	0.30	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1527	84	152	1406	0	0	0	0	218	0	604
Future Volume (veh/h)	0	1527	84	152	1406	0	0	0	0	218	0	604
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1678	92	167	1545	0				240	0	664
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1581	86	166	1950	0				809	0	720
Arrive On Green	0.00	1.00	1.00	0.04	0.45	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	2851	151	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	865	905	167	1545	0				240	0	664
Grp Sat Flow(s),veh/h/ln	0	1439	1487	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	74.1	8.1	59.5	0.0				7.3	0.0	26.6
Cycle Q Clear(g_c), s	0.0	0.0	74.1	8.1	59.5	0.0				7.3	0.0	26.6
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	820	848	166	1950	0				809	0	720
V/C Ratio(X)	0.00	1.05	1.07	1.00	0.79	0.00				0.30	0.00	0.92
Avail Cap(c_a), veh/h	0	820	848	166	1950	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.68	0.68	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	45.7	27.7	0.0				41.6	0.0	49.1
Incr Delay (d2), s/veh	0.0	41.7	45.7	21.8	0.3	0.0				0.2	0.0	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.5	10.8	6.5	21.0	0.0				3.2	0.0	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	41.7	45.7	67.5	28.0	0.0				41.9	0.0	65.9
LnGrp LOS	A	F	F	F	C	A				D	A	E
Approach Vol, veh/h		1770			1712						904	
Approach Delay, s/veh		43.8			31.9						59.5	
Approach LOS		D			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.0	80.0		36.0		94.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	10.1	76.1		28.6		61.5
Green Ext Time (p_c), s	0.0	0.0		0.9		19.8

Intersection Summary		
HCM 6th Ctrl Delay		42.4
HCM 6th LOS		D

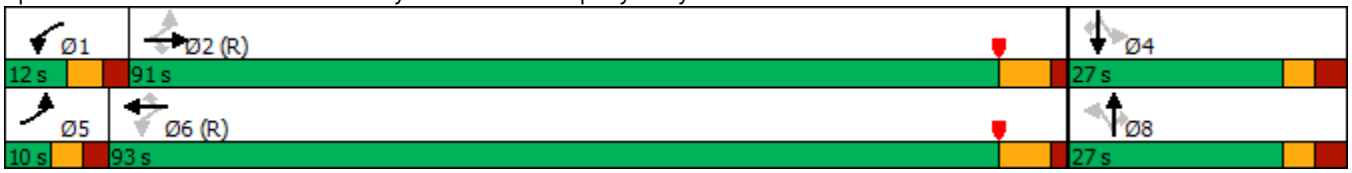
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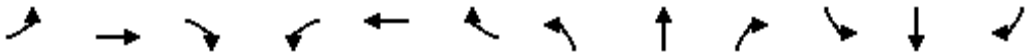
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1400	27	92	1804	47	22	3	79	91	9	63
Future Volume (vph)	32	1400	27	92	1804	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	95.7	89.6	89.6	99.8	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.74	0.69	0.69	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.25	0.70	0.03	0.43	0.85	0.04	0.15	0.01	0.33	0.61	0.05	0.27
Control Delay	7.0	5.3	0.0	6.0	17.0	1.4	51.4	47.7	13.3	69.3	48.6	10.5
Queue Delay	0.0	0.4	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	5.7	0.0	6.0	18.4	1.4	51.4	47.7	13.3	69.3	48.6	10.5
LOS	A	A	A	A	B	A	D	D	B	E	D	B
Approach Delay		5.7			17.4			22.2			45.5	
Approach LOS		A			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 80.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy

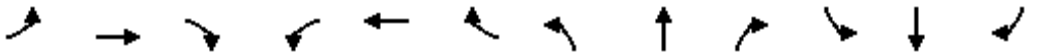




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	1538	30	101	1982	52	24	3	87	100	10	69
v/c Ratio	0.25	0.70	0.03	0.43	0.85	0.04	0.15	0.01	0.33	0.61	0.05	0.27
Control Delay	7.0	5.3	0.0	6.0	17.0	1.4	51.4	47.7	13.3	69.3	48.6	10.5
Queue Delay	0.0	0.4	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	5.7	0.0	6.0	18.4	1.4	51.4	47.7	13.3	69.3	48.6	10.5
Queue Length 50th (ft)	2	143	0	17	926	0	18	2	0	81	8	0
Queue Length 95th (ft)	m5	161	m0	m26	m930	m0	44	12	48	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	140	2202	1114	236	2339	1179	221	295	324	223	295	318
Starvation Cap Reductn	0	0	0	0	186	0	0	0	0	0	0	0
Spillback Cap Reductn	0	233	0	0	0	0	0	0	5	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.78	0.03	0.43	0.92	0.04	0.11	0.01	0.27	0.45	0.03	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1400	27	92	1804	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1400	27	92	1804	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	1538	30	101	1982	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	246	2354	1150	347	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	1538	30	101	1982	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	2354	1150	347	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.14	0.65	0.03	0.29	0.83	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	267	2354	1150	375	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.1	0.9	0.0	0.1	1.4	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.0	0.5	0.5	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	0.9	0.0	4.1	1.4	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		1603			2135			114			179	
Approach Delay, s/veh		1.0			1.5			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	6.0	* 84		* 21	4.4	* 86		* 21				
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8				
Green Ext Time (p_c), s	0.0	42.7		0.5	0.0	63.9		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		5.5	
HCM 6th LOS		A	

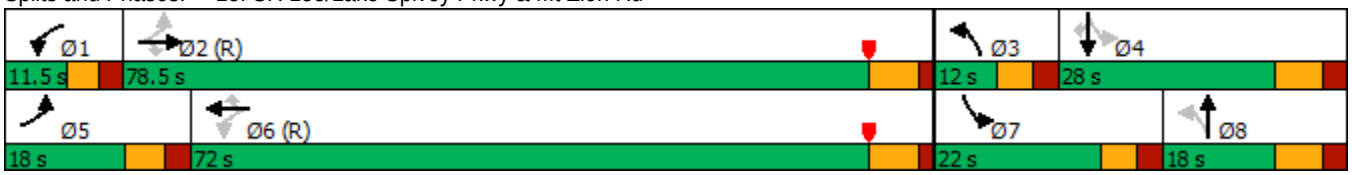
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	1181	84	31	1566	272	76	28	270	27	316
Future Volume (vph)	188	1181	84	31	1566	272	76	28	270	27	316
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	85.7	78.7	78.7	74.1	67.2	67.2	15.3	10.0	32.0	18.9	18.9
Actuated g/C Ratio	0.66	0.61	0.61	0.57	0.52	0.52	0.12	0.08	0.25	0.15	0.15
v/c Ratio	0.91	0.66	0.09	0.14	1.03	0.32	0.46	0.39	0.89	0.11	0.90
Control Delay	80.1	12.9	0.2	10.8	49.0	5.7	50.0	38.2	73.7	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	12.9	0.2	10.8	49.0	5.7	50.0	38.2	73.7	47.9	52.2
LOS	F	B	A	B	D	A	D	D	E	D	D
Approach Delay		20.8			42.1			44.9		61.5	
Approach LOS		C			D			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.5	Intersection LOS: D
Intersection Capacity Utilization 91.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





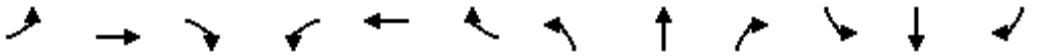
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	1284	91	34	1702	296	83	63	293	29	343
v/c Ratio	0.91	0.66	0.09	0.14	1.03	0.32	0.46	0.39	0.89	0.11	0.90
Control Delay	80.1	12.9	0.2	10.8	49.0	5.7	50.0	38.2	73.7	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	12.9	0.2	10.8	49.0	5.7	50.0	38.2	73.7	47.9	52.2
Queue Length 50th (ft)	109	534	0	8	~814	31	54	24	219	21	142
Queue Length 95th (ft)	m#269	516	m2	m14	#956	m63	100	71	#314	51	#306
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	223	1932	1029	237	1651	930	179	174	328	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.66	0.09	0.14	1.03	0.32	0.46	0.36	0.89	0.10	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1181	84	31	1566	272	76	28	30	270	27	316
Future Volume (veh/h)	188	1181	84	31	1566	272	76	28	30	270	27	316
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1284	91	34	1702	296	83	30	33	293	29	343
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	294	1843	901	320	1700	831	222	68	75	340	301	255
Arrive On Green	0.14	1.00	1.00	0.07	1.00	1.00	0.05	0.08	0.08	0.12	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	1781	1870	1585
Grp Volume(v), veh/h	204	1284	91	34	1702	296	83	0	63	293	29	343
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1781	1870	1585
Q Serve(g_s), s	7.0	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	294	1843	901	320	1700	831	222	0	143	340	301	255
V/C Ratio(X)	0.69	0.70	0.10	0.11	1.00	0.36	0.37	0.00	0.44	0.86	0.10	1.35
Avail Cap(c_a), veh/h	329	1843	901	344	1700	831	222	0	143	340	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.47	0.47	0.47	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.7	0.0	0.0	12.6	0.0	0.0	51.6	0.0	56.6	48.7	46.5	54.6
Incr Delay (d2), s/veh	3.8	1.6	0.2	0.1	15.2	0.6	1.0	0.0	4.5	19.7	0.3	179.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.4	0.0	0.4	3.6	0.1	2.6	0.0	2.2	3.4	0.8	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.5	1.6	0.2	12.6	15.2	0.6	52.6	0.0	61.1	68.3	46.8	234.1
LnGrp LOS	B	A	A	B	F	A	D	A	E	E	D	F
Approach Vol, veh/h		1579			2032			146			665	
Approach Delay, s/veh		3.1			13.0			56.3			152.9	
Approach LOS		A			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	15.5	74.5	22.0	18.0
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.0	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.5	22.9	9.0	2.0	18.0	6.6
Green Ext Time (p_c), s	0.0	30.6	0.0	0.0	0.1	47.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

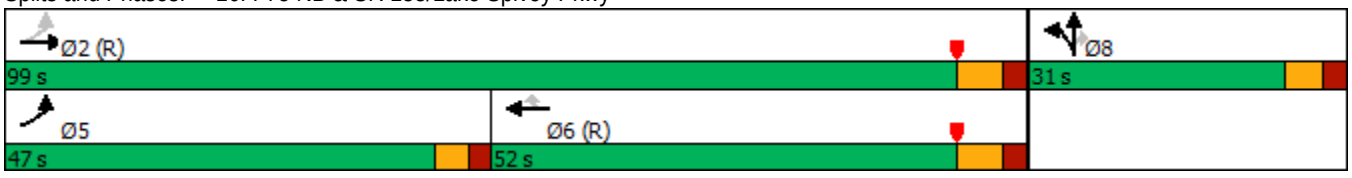
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	766	1345	1179	857	0	243
Future Volume (vph)	766	1345	1179	857	0	243
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	93.5	92.1	45.1	45.1	24.9	24.9
Actuated g/C Ratio	0.72	0.71	0.35	0.35	0.19	0.19
v/c Ratio	1.35	0.65	1.17	1.13	1.11	0.73
Control Delay	190.3	19.6	114.1	82.4	129.5	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	190.3	19.6	114.1	82.4	129.5	47.0
LOS	F	B	F	F	F	D
Approach Delay		81.5	100.7		95.2	
Approach LOS		F	F		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 91.5	Intersection LOS: F
Intersection Capacity Utilization 129.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





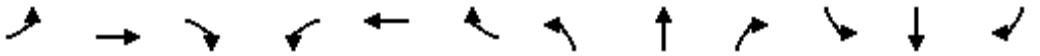
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	842	1478	1296	942	376	267
v/c Ratio	1.35	0.65	1.17	1.13	1.11	0.73
Control Delay	190.3	19.6	114.1	82.4	129.5	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	190.3	19.6	114.1	82.4	129.5	47.0
Queue Length 50th (ft)	~889	554	~675	~358	~362	152
Queue Length 95th (ft)	m#974	m581	m#681	m#359	#561	254
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	623	2263	1108	833	339	367
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.35	0.65	1.17	1.13	1.11	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	766	1345	0	0	1179	857	342	0	243	0	0	0
Future Volume (veh/h)	766	1345	0	0	1179	857	342	0	243	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	842	1478	0	0	1296	0	376	0	267			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	624	2298	0	0	1125		341	0	304			
Arrive On Green	0.11	0.23	0.00	0.00	0.69	0.00	0.19	0.00	0.19			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	842	1478	0	0	1296	0	376	0	267			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	53.4	0.0	0.0	45.1	0.0	24.9	0.0	21.3			
Cycle Q Clear(g_c), s	41.5	53.4	0.0	0.0	45.1	0.0	24.9	0.0	21.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	624	2298	0	0	1125		341	0	304			
V/C Ratio(X)	1.35	0.64	0.00	0.00	1.15		1.10	0.00	0.88			
Avail Cap(c_a), veh/h	624	2298	0	0	1125		341	0	304			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.21	0.21	0.00	0.00	0.12	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	52.6	35.0	0.0	0.0	19.9	0.0	52.6	0.0	51.1			
Incr Delay (d2), s/veh	159.5	0.3	0.0	0.0	69.6	0.0	79.0	0.0	23.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	49.3	23.1	0.0	0.0	18.1	0.0	18.1	0.0	10.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	212.1	35.3	0.0	0.0	89.5	0.0	131.6	0.0	74.6			
LnGrp LOS	F	D	A	A	F		F	A	E			
Approach Vol, veh/h		2320			1296	A		643				
Approach Delay, s/veh		99.5			89.5			107.9				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		99.0			47.0	52.0		31.0				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		55.4			43.5	47.1		26.9				
Green Ext Time (p_c), s		24.8			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	97.7
HCM 6th LOS	F

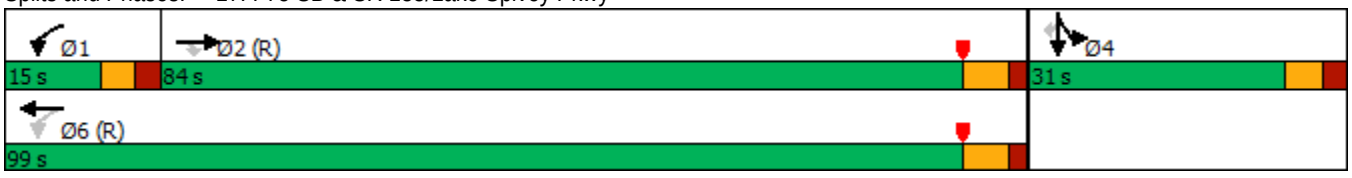
Notes

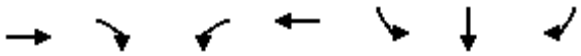
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1689	364	132	1334	441	0	299
Future Volume (vph)	1689	364	132	1334	441	0	299
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	78.9	78.9	94.1	93.6	23.9	23.9	23.9
Actuated g/C Ratio	0.61	0.61	0.72	0.72	0.18	0.18	0.18
v/c Ratio	0.97	0.36	0.82	0.64	0.80	0.80	0.94
Control Delay	19.0	0.8	51.7	2.2	69.8	69.8	75.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	0.8	51.7	2.2	69.8	69.8	75.6
LOS	B	A	D	A	E	E	E
Approach Delay	15.8			6.6		72.1	
Approach LOS	B			A		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 22.4	Intersection LOS: C
Intersection Capacity Utilization 129.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1877	404	147	1482	245	245	332
v/c Ratio	0.97	0.36	0.82	0.64	0.80	0.80	0.94
Control Delay	19.0	0.8	51.7	2.2	69.8	69.8	75.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	0.8	51.7	2.2	69.8	69.8	75.6
Queue Length 50th (ft)	353	0	68	0	208	208	219
Queue Length 95th (ft)	m284	m0	m50	m0	#334	#334	#400
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1939	1119	183	2301	320	320	363
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.36	0.80	0.64	0.77	0.77	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1689	364	132	1334	0	0	0	0	441	0	299
Future Volume (veh/h)	0	1689	364	132	1334	0	0	0	0	441	0	299
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1877	404	147	1482	0				490	0	332
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2019	987	239	2313	0				680	0	302
Arrive On Green	0.00	1.00	1.00	0.05	0.71	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1877	404	147	1482	0				490	0	332
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.7	31.4	0.0				16.8	0.0	24.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.7	31.4	0.0				16.8	0.0	24.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2019	987	239	2313	0				680	0	302
V/C Ratio(X)	0.00	0.93	0.41	0.62	0.64	0.00				0.72	0.00	1.10
Avail Cap(c_a), veh/h	0	2019	987	283	2313	0				680	0	302
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.2	9.9	0.0				49.4	0.0	52.6
Incr Delay (d2), s/veh	0.0	1.0	0.1	0.3	0.1	0.0				3.7	0.0	80.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	1.3	9.3	0.0				7.5	0.0	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.0	0.1	7.5	10.0	0.0				53.1	0.0	133.2
LnGrp LOS	A	A	A	A	A	A				D	A	F
Approach Vol, veh/h		2281			1629						822	
Approach Delay, s/veh		0.9			9.8						85.4	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.8	87.2		31.0		99.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.7	2.0		26.8		33.4
Green Ext Time (p_c), s	0.1	61.3		0.0		33.6

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

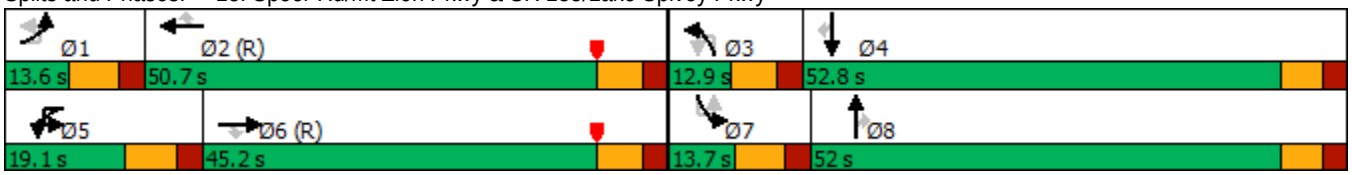
User approved volume balancing among the lanes for turning movement.

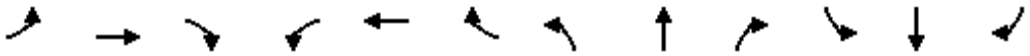
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	993	82	276	1074	155	78	216	791	161	92	74
Future Volume (vph)	89	993	82	276	1074	155	78	216	791	161	92	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.1	38.1	38.1	11.6	43.6	43.6	6.0	45.4	45.4	6.3	46.2	46.2
Actuated g/C Ratio	0.05	0.29	0.29	0.09	0.34	0.34	0.05	0.35	0.35	0.05	0.36	0.36
v/c Ratio	0.61	1.20	0.16	0.99	1.10	0.26	0.54	0.19	1.33	1.07	0.08	0.12
Control Delay	72.0	134.2	4.1	115.8	86.4	3.6	73.8	30.0	188.6	146.0	28.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.0	134.2	4.1	115.8	86.4	3.6	73.8	30.0	188.6	146.0	28.1	0.4
LOS	E	F	A	F	F	A	E	C	F	F	C	A
Approach Delay		120.3			83.3			148.8			80.0	
Approach LOS		F			F			F			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 111.0	Intersection LOS: F
Intersection Capacity Utilization 113.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





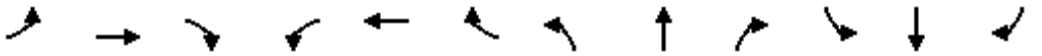
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	1091	90	303	1180	170	86	237	869	177	101	81
v/c Ratio	0.61	1.20	0.16	0.99	1.10	0.26	0.54	0.19	1.33	1.07	0.08	0.12
Control Delay	72.0	134.2	4.1	115.8	86.4	3.6	73.8	30.0	188.6	146.0	28.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.0	134.2	4.1	115.8	86.4	3.6	73.8	30.0	188.6	146.0	28.1	0.4
Queue Length 50th (ft)	43	~600	6	140	~582	0	37	73	~864	~84	29	0
Queue Length 95th (ft)	m67	#741	m17	m#224	m#718	m32	65	105	#1118	#162	50	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	161	912	570	306	1071	643	158	1235	653	166	1257	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	1.20	0.16	0.99	1.10	0.26	0.54	0.19	1.33	1.07	0.08	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	993	82	276	1074	155	78	216	791	161	92	74
Future Volume (veh/h)	89	993	82	276	1074	155	78	216	791	161	92	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	1091	90	303	1180	170	86	237	869	177	101	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	155	926	465	308	1095	535	152	1241	554	167	1270	567
Arrive On Green	0.09	0.59	0.59	0.18	0.67	0.67	0.04	0.35	0.35	0.05	0.36	0.36
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	98	1091	90	303	1180	170	86	237	869	177	101	81
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.6	38.1	3.4	11.4	43.9	5.8	3.2	6.0	45.4	6.3	2.4	4.5
Cycle Q Clear(g_c), s	3.6	38.1	3.4	11.4	43.9	5.8	3.2	6.0	45.4	6.3	2.4	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	926	465	308	1095	535	152	1241	554	167	1270	567
V/C Ratio(X)	0.63	1.18	0.19	0.98	1.08	0.32	0.56	0.19	1.57	1.06	0.08	0.14
Avail Cap(c_a), veh/h	162	926	465	308	1095	535	159	1241	554	167	1270	567
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	26.9	19.7	53.3	21.1	14.9	60.9	29.5	42.3	61.8	27.6	28.3
Incr Delay (d2), s/veh	5.1	88.3	0.6	36.7	46.2	1.0	4.2	0.1	265.1	85.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	20.1	1.3	5.9	14.8	1.9	1.5	2.5	57.7	4.7	1.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	115.2	20.4	90.0	67.4	15.9	65.1	29.6	307.4	147.3	27.6	28.4
LnGrp LOS	E	F	C	F	F	B	E	C	F	F	C	C
Approach Vol, veh/h		1279			1653			1192			359	
Approach Delay, s/veh		104.5			66.2			234.7			86.8	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	51.0	12.6	53.1	19.1	45.2	13.7	52.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.6	45.9	5.2	6.5	13.4	40.1	8.3	47.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	123.6
HCM 6th LOS	F

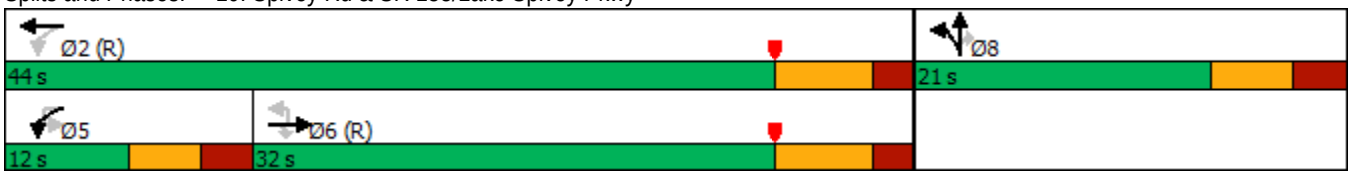
Notes

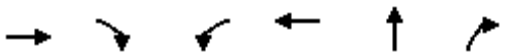
User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	803	16	108	1063	0	346
Future Volume (vph)	803	16	108	1063	0	346
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	32.0	32.0	12.0	44.0	21.0	21.0
Total Split (%)	49.2%	49.2%	18.5%	67.7%	32.3%	32.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	30.1	30.1	40.8	40.0	11.5	11.5
Actuated g/C Ratio	0.46	0.46	0.63	0.62	0.18	0.18
v/c Ratio	0.62	0.02	0.33	0.62	0.13	0.80
Control Delay	17.2	0.1	4.8	15.8	22.2	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.1	4.8	15.8	22.2	22.7
LOS	B	A	A	B	C	C
Approach Delay	16.9			14.8	22.6	
Approach LOS	B			B	C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 33 (51%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	892	18	120	1181	41	384
v/c Ratio	0.62	0.02	0.33	0.62	0.13	0.80
Control Delay	17.2	0.1	4.8	15.8	22.2	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.1	4.8	15.8	22.2	22.7
Queue Length 50th (ft)	151	0	14	508	14	48
Queue Length 95th (ft)	220	0	m19	m475	35	#160
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1441	800	369	1917	385	539
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.02	0.33	0.62	0.11	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	0	803	16	108	1063	0	37	0	346	0	0
Future Volume (veh/h)	0	0	803	16	108	1063	0	37	0	346	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		0	1663	1826	1826	1663	0	1856	1856	1856		
Adj Flow Rate, veh/h		0	892	18	120	1181	0	41	0	384		
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %		0	16	5	5	16	0	3	3	3		
Cap, veh/h		0	1258	616	350	1808	0	389	0	346		
Arrive On Green		0.00	0.40	0.40	0.16	1.00	0.00	0.22	0.00	0.22		
Sat Flow, veh/h		0	3243	1547	1739	3243	0	1767	0	1572		
Grp Volume(v), veh/h		0	892	18	120	1181	0	41	0	384		
Grp Sat Flow(s),veh/h/ln		0	1580	1547	1739	1580	0	1767	0	1572		
Q Serve(g_s), s		0.0	15.4	0.5	2.3	0.0	0.0	1.2	0.0	14.3		
Cycle Q Clear(g_c), s		0.0	15.4	0.5	2.3	0.0	0.0	1.2	0.0	14.3		
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00		
Lane Grp Cap(c), veh/h		0	1258	616	350	1808	0	389	0	346		
V/C Ratio(X)		0.00	0.71	0.03	0.34	0.65	0.00	0.11	0.00	1.11		
Avail Cap(c_a), veh/h		0	1258	616	368	1808	0	389	0	346		
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)		0.00	1.00	1.00	0.09	0.09	0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh		0.0	16.4	11.9	10.2	0.0	0.0	20.2	0.0	25.4		
Incr Delay (d2), s/veh		0.0	3.4	0.1	0.1	0.2	0.0	0.1	0.0	81.4		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		0.0	5.1	0.1	0.6	0.0	0.0	0.5	0.0	12.7		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	19.8	12.0	10.2	0.2	0.0	20.4	0.0	106.8		
LnGrp LOS		A	B	B	B	A	A	C	A	F		
Approach Vol, veh/h			910			1301			425			
Approach Delay, s/veh			19.6			1.1			98.4			
Approach LOS			B			A			F			

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	44.0			11.3	32.7		21.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	37.2			6.0	25.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			4.3	17.4		16.3					
Green Ext Time (p_c), s	22.6			0.0	5.6		0.0					

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(I)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	454.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	225	339	384	111	86	106
Future Vol, veh/h	225	339	384	111	86	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	369	556	630	182	141	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	812	0	-	0	2015	721
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	1294	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	810	-	-	-	~ 63	422
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	810	-	-	-	~ 21	422
Mov Cap-2 Maneuver	-	-	-	-	~ 21	-
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	253	-

Approach	EB	WB	SB
HCM Control Delay, s	5.2	0	$ 2947.9
HCM LOS			F

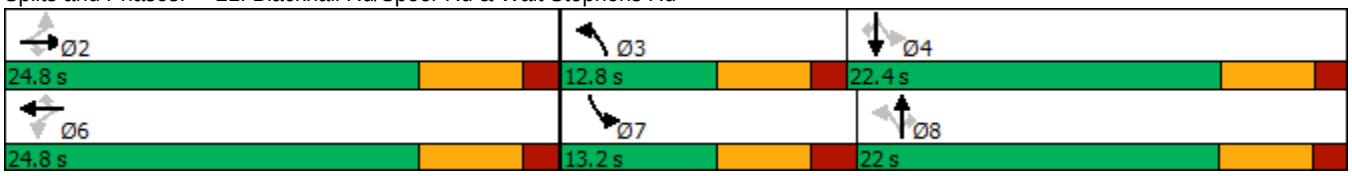
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	810	-	-	-	44
HCM Lane V/C Ratio	0.455	-	-	-	7.154
HCM Control Delay (s)	13.1	0	-		$ 2947.9
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	2.4	-	-	-	37

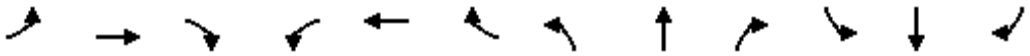
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	275	59	121	327	638	52	399	102	210	84	16
Future Volume (vph)	34	275	59	121	327	638	52	399	102	210	84	16
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	18.3	18.3	18.3	18.3	18.3	18.3	22.9	15.9	15.9	25.2	21.5	21.5
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.27	0.27	0.42	0.36	0.36
v/c Ratio	0.17	0.54	0.11	0.49	0.65	0.93	0.10	0.90	0.21	0.70	0.14	0.03
Control Delay	17.5	21.4	0.4	24.3	24.1	31.0	9.0	46.5	2.5	24.7	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	21.4	0.4	24.3	24.1	31.0	9.0	46.5	2.5	24.7	16.4	0.1
LOS	B	C	A	C	C	C	A	D	A	C	B	A
Approach Delay		17.6			28.2			34.8			21.1	
Approach LOS		B			C			C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 59.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd

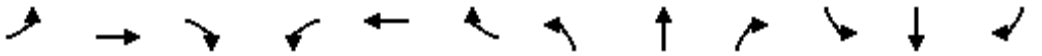




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	309	66	136	367	717	58	448	115	236	94	18
v/c Ratio	0.17	0.54	0.11	0.49	0.65	0.93	0.10	0.90	0.21	0.70	0.14	0.03
Control Delay	17.5	21.4	0.4	24.3	24.1	31.0	9.0	46.5	2.5	24.7	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	21.4	0.4	24.3	24.1	31.0	9.0	46.5	2.5	24.7	16.4	0.1
Queue Length 50th (ft)	10	91	0	40	113	106	10	155	0	47	26	0
Queue Length 95th (ft)	30	157	0	87	190	#319	26	#302	16	#125	56	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	231	579	599	278	573	772	553	507	550	337	674	678
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.53	0.11	0.49	0.64	0.93	0.10	0.88	0.21	0.70	0.14	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	275	59	121	327	638	52	399	102	210	84	16
Future Volume (veh/h)	34	275	59	121	327	638	52	399	102	210	84	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	309	66	136	367	717	58	448	115	236	94	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	193	579	491	294	575	487	591	499	423	360	595	504
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.27	0.27	0.12	0.32	0.32
Sat Flow, veh/h	520	1870	1585	1000	1856	1572	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	38	309	66	136	367	717	58	448	115	236	94	18
Grp Sat Flow(s),veh/h/ln	520	1870	1585	1000	1856	1572	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.0	8.2	1.8	7.8	10.2	18.5	1.3	13.8	3.4	5.6	2.2	0.5
Cycle Q Clear(g_c), s	14.2	8.2	1.8	15.9	10.2	18.5	1.3	13.8	3.4	5.6	2.2	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	579	491	294	575	487	591	499	423	360	595	504
V/C Ratio(X)	0.20	0.53	0.13	0.46	0.64	1.47	0.10	0.90	0.27	0.66	0.16	0.04
Avail Cap(c_a), veh/h	193	579	491	294	575	487	671	507	430	360	595	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	17.0	14.8	23.6	17.7	20.6	13.5	21.1	17.3	15.1	14.6	14.0
Incr Delay (d2), s/veh	1.1	1.8	0.3	2.4	3.3	223.4	0.1	18.5	0.3	4.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.2	0.6	1.8	4.1	35.8	0.5	7.6	1.1	2.2	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	18.8	15.1	26.1	21.1	244.1	13.6	39.6	17.7	19.3	14.7	14.1
LnGrp LOS	C	B	B	C	C	F	B	D	B	B	B	B
Approach Vol, veh/h		413			1220			621			348	
Approach Delay, s/veh		18.8			152.7			33.1			17.8	
Approach LOS		B			F			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	10.1	24.8		24.8	13.2	21.7				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		16.2	3.3	4.2		20.5	7.6	15.8				
Green Ext Time (p_c), s		0.8	0.0	0.3		0.0	0.0	0.1				

Intersection Summary	
HCM 6th Ctrl Delay	84.9
HCM 6th LOS	F

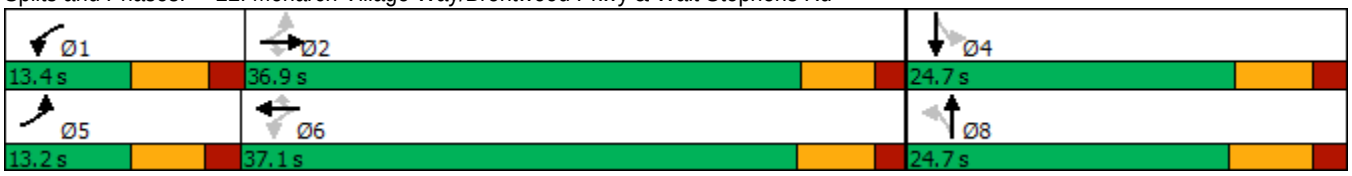
Notes

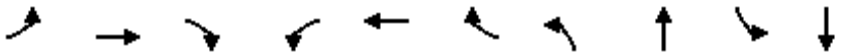
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	26	413	68	93	750	43	187	29	62	36
Future Volume (vph)	26	413	68	93	750	43	187	29	62	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	36.9	36.9	13.4	37.1	37.1	24.7	24.7	24.7	24.7
Total Split (%)	17.6%	49.2%	49.2%	17.9%	49.5%	49.5%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	33.1	28.0	28.0	35.6	33.4	33.4	15.3	15.3	15.6	15.6
Actuated g/C Ratio	0.50	0.42	0.42	0.54	0.50	0.50	0.23	0.23	0.23	0.23
v/c Ratio	0.11	0.60	0.10	0.24	0.92	0.06	0.75	0.36	0.25	0.32
Control Delay	7.7	20.5	0.6	8.5	36.1	0.1	43.7	9.3	24.6	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	20.5	0.6	8.5	36.1	0.1	43.7	9.3	24.6	10.4
LOS	A	C	A	A	D	A	D	A	C	B
Approach Delay		17.2			31.5			28.1		15.0
Approach LOS		B			C			C		B

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 66.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd

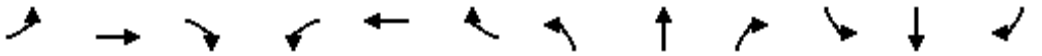




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	469	77	106	852	49	213	176	70	149
v/c Ratio	0.11	0.60	0.10	0.24	0.92	0.06	0.75	0.36	0.25	0.32
Control Delay	7.7	20.5	0.6	8.5	36.1	0.1	43.7	9.3	24.6	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	20.5	0.6	8.5	36.1	0.1	43.7	9.3	24.6	10.4
Queue Length 50th (ft)	5	163	0	19	267	0	81	11	23	13
Queue Length 95th (ft)	15	251	3	39	#653	0	#184	56	58	56
Internal Link Dist (ft)		2243			6582			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	285	886	828	448	929	861	339	554	337	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.53	0.09	0.24	0.92	0.06	0.63	0.32	0.21	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	413	68	93	750	43	187	29	126	62	36	95
Future Volume (veh/h)	26	413	68	93	750	43	187	29	126	62	36	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	469	77	106	852	49	212	33	143	70	41	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	180	731	619	413	809	685	323	77	335	298	115	303
Arrive On Green	0.04	0.39	0.39	0.09	0.44	0.44	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1767	1856	1572	1239	306	1326	1209	455	1199
Grp Volume(v), veh/h	30	469	77	106	852	49	212	0	176	70	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	1856	1572	1239	0	1632	1209	0	1654
Q Serve(g_s), s	0.7	14.5	2.2	2.4	31.0	1.3	12.1	0.0	6.4	3.7	0.0	5.3
Cycle Q Clear(g_c), s	0.7	14.5	2.2	2.4	31.0	1.3	17.3	0.0	6.4	10.1	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.72
Lane Grp Cap(c), veh/h	180	731	619	413	809	685	323	0	413	298	0	419
V/C Ratio(X)	0.17	0.64	0.12	0.26	1.05	0.07	0.66	0.00	0.43	0.23	0.00	0.36
Avail Cap(c_a), veh/h	277	815	691	435	809	685	323	0	413	303	0	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	17.6	13.9	12.0	20.1	11.7	28.9	0.0	22.2	26.5	0.0	21.8
Incr Delay (d2), s/veh	0.2	2.4	0.2	0.1	46.7	0.1	4.8	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.8	0.7	0.8	21.4	0.4	3.9	0.0	2.5	1.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	20.0	14.1	12.2	66.8	11.8	33.7	0.0	22.9	26.9	0.0	22.3
LnGrp LOS	B	B	B	B	F	B	C	A	C	C	A	C
Approach Vol, veh/h		576			1007			388			219	
Approach Delay, s/veh		19.0			58.3			28.8			23.8	
Approach LOS		B			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	33.9		24.7	9.3	37.1		24.7				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 31		* 18	7.0	* 31		18.0				
Max Q Clear Time (g_c+I1), s	4.4	16.5		12.1	2.7	33.0		19.3				
Green Ext Time (p_c), s	0.0	4.6		0.5	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		39.3	
HCM 6th LOS		D	

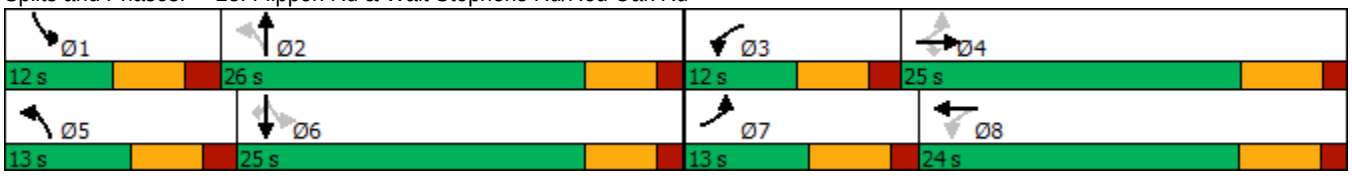
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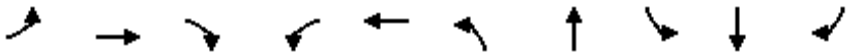
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	228	177	461	22	192	340	388	23	306	194
Future Volume (vph)	228	177	461	22	192	340	388	23	306	194
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	25.0	22.5	22.5	20.2	13.7	28.4	26.2	23.2	17.6	17.6
Actuated g/C Ratio	0.36	0.32	0.32	0.29	0.20	0.41	0.38	0.33	0.25	0.25
v/c Ratio	0.70	0.33	0.60	0.06	0.67	1.08	0.64	0.08	0.74	0.39
Control Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
LOS	C	C	A	B	C	F	C	B	D	A
Approach Delay		15.3			32.8		57.0		23.4	
Approach LOS		B			C		E		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 69.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 32.0	Intersection LOS: C
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



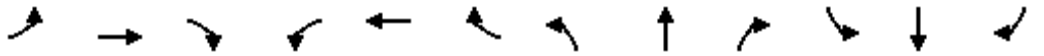


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	253	197	512	24	245	378	451	26	340	216
v/c Ratio	0.70	0.33	0.60	0.06	0.67	1.08	0.64	0.08	0.74	0.39
Control Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
Queue Length 50th (ft)	78	58	0	6	97	~118	136	6	134	0
Queue Length 95th (ft)	#160	135	74	20	167	#297	#369	20	#255	48
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	363	608	862	395	477	351	701	311	515	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.32	0.59	0.06	0.51	1.08	0.64	0.08	0.66	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	177	461	22	192	29	340	388	18	23	306	194
Future Volume (veh/h)	228	177	461	22	192	29	340	388	18	23	306	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	253	197	512	24	213	32	378	431	20	26	340	216
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	382	526	445	307	326	49	344	541	25	242	434	368
Arrive On Green	0.10	0.28	0.28	0.03	0.21	0.21	0.10	0.31	0.31	0.03	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1767	1576	237	1781	1773	82	1753	1841	1560
Grp Volume(v), veh/h	253	197	512	24	0	245	378	0	451	26	340	216
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1813	1781	0	1856	1753	1841	1560
Q Serve(g_s), s	6.9	5.7	19.0	0.7	0.0	8.4	7.0	0.0	15.1	0.7	11.7	8.3
Cycle Q Clear(g_c), s	6.9	5.7	19.0	0.7	0.0	8.4	7.0	0.0	15.1	0.7	11.7	8.3
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	382	526	445	307	0	375	344	0	566	242	434	368
V/C Ratio(X)	0.66	0.37	1.15	0.08	0.00	0.65	1.10	0.00	0.80	0.11	0.78	0.59
Avail Cap(c_a), veh/h	382	526	445	413	0	480	344	0	566	338	528	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	19.5	24.3	19.9	0.0	24.6	22.7	0.0	21.6	19.1	24.2	22.9
Incr Delay (d2), s/veh	4.2	0.4	90.5	0.1	0.0	2.1	77.4	0.0	8.9	0.2	8.5	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.3	17.6	0.3	0.0	3.6	9.2	0.0	7.0	0.3	5.5	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	20.0	114.8	20.0	0.0	26.7	100.1	0.0	30.5	19.3	32.7	26.1
LnGrp LOS	C	B	F	B	A	C	F	A	C	B	C	C
Approach Vol, veh/h		962			269			829			582	
Approach Delay, s/veh		71.5			26.1			62.2			29.7	
Approach LOS		E			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	26.2	8.0	25.1	13.0	21.5	13.0	20.1
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.7	17.1	2.7	21.0	9.0	13.7	8.9	10.4
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	2.2	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

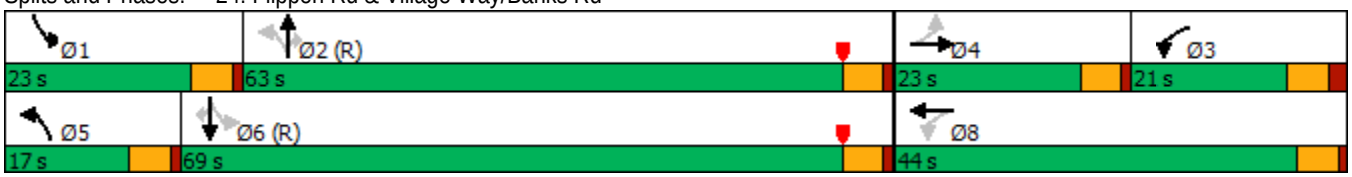
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	19	4	132	2	1	519	163	216	577	7
Future Volume (vph)	19	4	132	2	1	519	163	216	577	7
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	5.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	11.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	23.0	23.0	21.0	44.0	17.0	63.0	63.0	23.0	69.0	69.0
Total Split (%)	17.7%	17.7%	16.2%	33.8%	13.1%	48.5%	48.5%	17.7%	53.1%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	22.3	23.3	86.9	76.9	76.9	96.7	93.7	93.7
Actuated g/C Ratio		0.12	0.17	0.18	0.67	0.59	0.59	0.74	0.72	0.72
v/c Ratio		0.43	0.54	0.42	0.00	0.52	0.19	0.43	0.48	0.01
Control Delay		60.0	55.3	9.0	7.0	19.7	4.2	8.2	11.3	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		60.0	55.3	9.0	7.0	19.7	4.2	8.2	11.3	0.0
LOS		E	E	A	A	B	A	A	B	A
Approach Delay		60.0		29.7		16.0			10.4	
Approach LOS		E		C		B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	148	183	1	583	183	243	648	8
v/c Ratio	0.43	0.54	0.42	0.00	0.52	0.19	0.43	0.48	0.01
Control Delay	60.0	55.3	9.0	7.0	19.7	4.2	8.2	11.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	55.3	9.0	7.0	19.7	4.2	8.2	11.3	0.0
Queue Length 50th (ft)	20	111	1	0	295	11	60	210	0
Queue Length 95th (ft)	57	171	60	2	440	49	96	444	0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	93	340	607	599	1113	989	592	1342	1194
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.44	0.30	0.00	0.52	0.19	0.41	0.48	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	4	8	132	2	161	1	519	163	216	577	7
Future Volume (veh/h)	19	4	8	132	2	161	1	519	163	216	577	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1900	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	21	4	9	148	2	181	1	583	183	243	648	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	3	0	0	0	1	3	0	2	0
Cap, veh/h	45	13	5	207	3	253	507	1210	1009	538	1339	1153
Arrive On Green	0.08	0.08	0.08	0.04	0.16	0.16	0.00	0.64	0.64	0.08	0.72	0.72
Sat Flow, veh/h	0	155	56	1767	18	1595	1810	1885	1572	1810	1870	1610
Grp Volume(v), veh/h	34	0	0	148	0	183	1	583	183	243	648	8
Grp Sat Flow(s),veh/h/ln	210	0	0	1767	0	1613	1810	1885	1572	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	14.0	0.0	20.9	4.0	5.4	19.6	0.2
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.2	0.0	14.0	0.0	20.9	4.0	5.4	19.6	0.2
Prop In Lane	0.62		0.26	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	0	0	207	0	255	507	1210	1009	538	1339	1153
V/C Ratio(X)	0.55	0.00	0.00	0.71	0.00	0.72	0.00	0.48	0.18	0.45	0.48	0.01
Avail Cap(c_a), veh/h	140	0	0	344	0	484	669	1210	1009	649	1339	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	60.0	0.0	0.0	57.7	0.0	51.9	8.6	12.1	4.1	8.4	8.0	5.3
Incr Delay (d2), s/veh	15.2	0.0	0.0	4.5	0.0	7.8	0.0	1.4	0.4	0.6	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	4.9	0.0	6.2	0.0	8.4	2.0	1.8	7.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	0.0	0.0	62.2	0.0	59.7	8.6	13.5	4.5	9.0	8.9	5.3
LnGrp LOS	E	A	A	E	A	E	A	B	A	A	A	A
Approach Vol, veh/h		34			331			767			899	
Approach Delay, s/veh		75.2			60.8			11.3			8.9	
Approach LOS		E			E			B			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	88.4	11.0	15.6	5.4	98.1		26.6
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0		* 6
Max Green Setting (Gmax), s	18.0	58.0	15.0	18.0	12.0	64.0		* 39
Max Q Clear Time (g_c+I1), s	7.4	22.9	2.2	12.6	2.0	21.6		16.0
Green Ext Time (p_c), s	0.8	9.8	0.3	0.1	0.0	9.8		1.9

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	373	244	51	59	29
Future Vol, veh/h	29	373	244	51	59	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	434	284	59	69	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	343	0	-	0	816	314
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1216	-	-	-	347	726
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1216	-	-	-	334	726
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	608	-

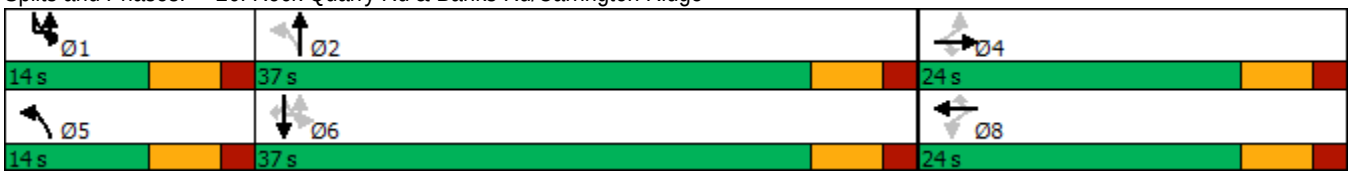
Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1216	-	-	-	406
HCM Lane V/C Ratio	0.028	-	-	-	0.252
HCM Control Delay (s)	8	0	-	-	16.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	117	11	312	57	23	11	170	498	3	750	77
Future Volume (vph)	117	11	312	57	23	11	170	498	3	750	77
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	37.0	14.0	37.0	37.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	18.7%	49.3%	18.7%	49.3%	49.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)		12.7	12.7		12.7	12.7	38.2	36.8	31.1	25.0	25.0
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.60	0.58	0.49	0.39	0.39
v/c Ratio		0.56	0.63		0.34	0.03	0.45	0.29	0.01	0.61	0.12
Control Delay		33.9	11.5		27.2	0.1	9.7	8.6	6.3	18.1	1.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		33.9	11.5		27.2	0.1	9.7	8.6	6.3	18.1	1.5
LOS		C	B		C	A	A	A	A	B	A
Approach Delay		18.0			24.0			8.9		16.5	
Approach LOS		B			C			A		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 63.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	141	343	88	12	187	567	3	824	85
v/c Ratio	0.56	0.63	0.34	0.03	0.45	0.29	0.01	0.61	0.12
Control Delay	33.9	11.5	27.2	0.1	9.7	8.6	6.3	18.1	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	11.5	27.2	0.1	9.7	8.6	6.3	18.1	1.5
Queue Length 50th (ft)	51	20	31	0	27	45	1	128	0
Queue Length 95th (ft)	109	93	72	0	63	126	4	205	11
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	364	664	379	559	425	2004	557	1711	838
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.52	0.23	0.02	0.44	0.28	0.01	0.48	0.10

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	11	312	57	23	11	170	498	18	3	750	77
Future Volume (veh/h)	117	11	312	57	23	11	170	498	18	3	750	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1900	1870	1826	1826	1900	1826	1841
Adj Flow Rate, veh/h	129	12	343	63	25	12	187	547	20	3	824	85
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	1	0	0	0	2	5	5	0	5	4
Cap, veh/h	106	5	440	95	23	444	368	1515	55	409	1243	559
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.09	0.44	0.44	0.00	0.36	0.36
Sat Flow, veh/h	0	20	1598	0	84	1610	1781	3413	125	1810	3469	1560
Grp Volume(v), veh/h	141	0	343	88	0	12	187	278	289	3	824	85
Grp Sat Flow(s),veh/h/ln	20	0	1598	84	0	1610	1781	1735	1803	1810	1735	1560
Q Serve(g_s), s	0.0	0.0	12.9	0.0	0.0	0.4	4.0	6.9	6.9	0.1	13.1	2.4
Cycle Q Clear(g_c), s	18.0	0.0	12.9	18.0	0.0	0.4	4.0	6.9	6.9	0.1	13.1	2.4
Prop In Lane	0.91		1.00	0.72		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	111	0	440	118	0	444	368	770	801	409	1243	559
V/C Ratio(X)	1.27	0.00	0.78	0.75	0.00	0.03	0.51	0.36	0.36	0.01	0.66	0.15
Avail Cap(c_a), veh/h	111	0	440	118	0	444	426	823	856	621	1647	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	21.8	28.0	0.0	17.3	12.5	12.0	12.0	13.3	17.6	14.2
Incr Delay (d2), s/veh	174.8	0.0	8.7	22.8	0.0	0.0	0.8	0.6	0.6	0.0	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	5.6	2.1	0.0	0.1	1.3	2.3	2.4	0.0	4.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	206.6	0.0	30.5	50.9	0.0	17.3	13.3	12.6	12.6	13.3	18.9	14.5
LnGrp LOS	F	A	C	D	A	B	B	B	B	B	B	B
Approach Vol, veh/h		484			100			754			912	
Approach Delay, s/veh		81.8			46.8			12.8			18.5	
Approach LOS		F			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	35.0		24.0	11.9	29.4		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	31.0		18.0	8.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	8.9		20.0	6.0	15.1		20.0				
Green Ext Time (p_c), s	0.0	5.9		0.0	0.1	8.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.5	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	115	1	41	2	0	1	41	561	2	1	800	111
Future Vol, veh/h	115	1	41	2	0	1	41	561	2	1	800	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	0	7	0	0	0	5	5	0	0	5	5
Mvmt Flow	124	1	44	2	0	1	44	603	2	1	860	119

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1252	1555	430	1124	-	302	979	0	0	605	0	0
Stage 1	862	862	-	691	-	-	-	-	-	-	-	-
Stage 2	390	693	-	433	-	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.5	7.04	7.5	-	6.9	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	6.64	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4	3.37	3.5	-	3.3	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	124	114	560	163	0	700	683	-	-	983	-	-
Stage 1	306	375	-	406	0	-	-	-	-	-	-	-
Stage 2	592	448	-	577	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 118	107	560	142	-	700	683	-	-	983	-	-
Mov Cap-2 Maneuver	~ 118	107	-	142	-	-	-	-	-	-	-	-
Stage 1	286	375	-	380	-	-	-	-	-	-	-	-
Stage 2	553	419	-	530	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	10.2	0.7	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	560	700	983	-	-
HCM Lane V/C Ratio	0.065	-	-	0.079	0.002	0.001	-	-
HCM Control Delay (s)	10.6	-	-	12	10.2	8.7	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	69	147	7	5	136	4	7	74	10	5	81	102
Future Vol, veh/h	69	147	7	5	136	4	7	74	10	5	81	102
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	2	0	0	8	0	0	2	14	0	2	0
Mvmt Flow	87	186	9	6	172	5	9	94	13	6	103	129
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.9	10.2	9.7	10.5
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	31%	3%	3%
Vol Thru, %	81%	66%	94%	43%
Vol Right, %	11%	3%	3%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	91	223	145	188
LT Vol	7	69	5	5
Through Vol	74	147	136	81
RT Vol	10	7	4	102
Lane Flow Rate	115	282	184	238
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.41	0.268	0.331
Departure Headway (Hd)	5.474	5.233	5.265	5.013
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	655	689	683	716
Service Time	3.51	3.261	3.297	3.044
HCM Lane V/C Ratio	0.176	0.409	0.269	0.332
HCM Control Delay	9.7	11.9	10.2	10.5
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.6	2	1.1	1.4

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	132	55	15	243	60	71	8	21	18	5	1
Future Vol, veh/h	4	132	55	15	243	60	71	8	21	18	5	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	140	59	16	259	64	76	9	22	19	5	1
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.6	11.4	9.3	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	71%	100%	0%	100%	0%	75%
Vol Thru, %	8%	0%	71%	0%	80%	21%
Vol Right, %	21%	0%	29%	0%	20%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	4	187	15	303	24
LT Vol	71	4	0	15	0	18
Through Vol	8	0	132	0	243	5
RT Vol	21	0	55	0	60	1
Lane Flow Rate	106	4	199	16	322	26
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.156	0.007	0.275	0.025	0.441	0.039
Departure Headway (Hd)	5.27	5.688	4.978	5.566	4.924	5.517
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	678	628	720	642	728	644
Service Time	3.328	3.437	2.726	3.31	2.668	3.589
HCM Lane V/C Ratio	0.156	0.006	0.276	0.025	0.442	0.04
HCM Control Delay	9.3	8.5	9.6	8.5	11.5	8.8
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.6	0	1.1	0.1	2.3	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	8	634	5	4	465
Future Vol, veh/h	12	8	634	5	4	465
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	13	9	704	6	4	517

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1229	704	0	0	710	0
Stage 1	704	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	196	437	-	-	880	-
Stage 1	490	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	195	437	-	-	880	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	589	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	250	880	-
HCM Lane V/C Ratio	-	-	0.089	0.005	-
HCM Control Delay (s)	-	-	20.8	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1226	813	328	680	490	491
Future Volume (vph)	1226	813	328	680	490	491
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.1	59.1	88.7	87.5	48.1	48.1
Actuated g/C Ratio	0.39	0.39	0.59	0.58	0.32	0.32
v/c Ratio	1.16	0.90	1.32	0.41	1.15	0.86
Control Delay	124.0	19.6	206.2	18.0	135.4	34.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.0	19.6	206.2	18.0	135.4	34.5
LOS	F	B	F	B	F	C
Approach Delay	82.4			79.3	84.9	
Approach LOS	F			E	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 82.2	Intersection LOS: F
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1333	884	357	739	533	534
v/c Ratio	1.16	0.90	1.32	0.41	1.15	0.86
Control Delay	124.0	19.6	206.2	18.0	135.4	34.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.0	19.6	206.2	18.0	135.4	34.5
Queue Length 50th (ft)	~811	112	~407	201	~612	237
Queue Length 95th (ft)	#950	#575	#614	247	#843	#468
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1146	979	270	1784	463	622
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.90	1.32	0.41	1.15	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1226	813	328	680	490	491
Future Volume (veh/h)	1226	813	328	680	490	491
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1333	884	357	739	533	534
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1156	516	279	1810	467	416
Arrive On Green	0.39	0.39	0.15	0.58	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	1333	884	357	739	533	534
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	59.1	59.1	22.3	19.5	48.1	48.1
Cycle Q Clear(g_c), s	59.1	59.1	22.3	19.5	48.1	48.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1156	516	279	1810	467	416
V/C Ratio(X)	1.15	1.71	1.28	0.41	1.14	1.28
Avail Cap(c_a), veh/h	1156	516	279	1810	467	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	45.4	50.5	17.1	50.9	51.0
Incr Delay (d2), s/veh	79.1	329.6	150.0	0.7	86.4	145.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.9	65.3	22.1	6.9	27.9	45.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	124.5	375.1	200.5	17.8	137.3	196.3
LnGrp LOS	F	F	F	B	F	F
Approach Vol, veh/h	2217			1096	1067	
Approach Delay, s/veh	224.4			77.3	166.9	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.8		55.2	28.4	66.4
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		21.5		50.1	24.3	61.1
Green Ext Time (p_c), s		12.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	173.6
HCM 6th LOS	F

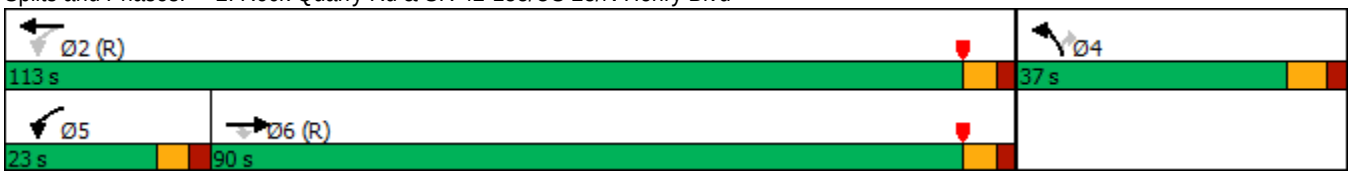
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1878	350	331	1135	379	450
Future Volume (vph)	1878	350	331	1135	379	450
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.9	83.9	107.0	106.9	30.1	30.1
Actuated g/C Ratio	0.56	0.56	0.71	0.71	0.20	0.20
v/c Ratio	1.19	0.35	1.39	0.57	1.11	1.00
Control Delay	118.2	4.1	233.1	11.8	135.1	75.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.2	4.1	233.1	11.8	135.1	75.8
LOS	F	A	F	B	F	E
Approach Delay	100.3			61.8	102.9	
Approach LOS	F			E	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 88.3	Intersection LOS: F
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1956	365	345	1182	395	469
v/c Ratio	1.19	0.35	1.39	0.57	1.11	1.00
Control Delay	118.2	4.1	233.1	11.8	135.1	75.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.2	4.1	233.1	11.8	135.1	75.8
Queue Length 50th (ft)	~1208	31	~398	270	~441	301
Queue Length 95th (ft)	#1346	m50	#605	324	#654	#543
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1641	1046	249	2074	355	470
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.35	1.39	0.57	1.11	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1878	350	331	1135	379	450
Future Volume (veh/h)	1878	350	331	1135	379	450
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1956	365	345	1182	395	469
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1657	887	338	2091	357	318
Arrive On Green	1.00	1.00	0.11	0.71	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	1956	365	345	1182	395	469
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	0.0	0.0	17.0	29.1	30.1	30.1
Cycle Q Clear(g_c), s	0.0	0.0	17.0	29.1	30.1	30.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1657	887	338	2091	357	318
V/C Ratio(X)	1.18	0.41	1.02	0.57	1.11	1.47
Avail Cap(c_a), veh/h	1657	887	338	2091	357	318
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	33.2	10.4	60.0	59.9
Incr Delay (d2), s/veh	83.7	0.5	54.7	1.1	79.0	229.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.3	0.1	11.1	8.6	21.3	44.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	83.7	0.5	87.9	11.5	138.9	289.8
LnGrp LOS	F	A	F	B	F	F
Approach Vol, veh/h	2321			1527	864	
Approach Delay, s/veh	70.6			28.8	220.8	
Approach LOS	E			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	23.0	90.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		31.1		32.1	19.0	2.0
Green Ext Time (p_c), s		34.8		0.0	0.0	69.2

Intersection Summary	
HCM 6th Ctrl Delay	84.6
HCM 6th LOS	F

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	2229	11	1487	29	18
Future Volume (vph)	2229	11	1487	29	18
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	136.0	136.0	136.0	14.0	14.0
Total Split (%)	90.7%	90.7%	90.7%	9.3%	9.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	133.9	133.9	133.9	7.2	7.2
Actuated g/C Ratio	0.89	0.89	0.89	0.05	0.05
v/c Ratio	0.88	0.11	0.58	0.35	0.19
Control Delay	16.7	3.9	5.5	80.3	30.7
Queue Delay	46.4	0.0	0.3	4.9	0.0
Total Delay	63.1	3.9	5.8	85.2	30.7
LOS	E	A	A	F	C
Approach Delay	63.1		5.8	64.8	
Approach LOS	E		A	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 90 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 40.5	Intersection LOS: D
Intersection Capacity Utilization 77.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2302	11	1517	30	18
v/c Ratio	0.88	0.11	0.58	0.35	0.19
Control Delay	16.7	3.9	5.5	80.3	30.7
Queue Delay	46.4	0.0	0.3	4.9	0.0
Total Delay	63.1	3.9	5.8	85.2	30.7
Queue Length 50th (ft)	1015	2	357	29	0
Queue Length 95th (ft)	m768	m2	m382	66	28
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2616	96	2620	94	101
Starvation Cap Reductn	666	0	0	0	0
Spillback Cap Reductn	0	0	452	31	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.18	0.11	0.70	0.48	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2229	27	11	1487	29	18
Future Volume (veh/h)	2229	27	11	1487	29	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	2274	28	11	1517	30	18
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2663	33	190	2632	51	46
Arrive On Green	1.00	1.00	1.00	1.00	0.03	0.03
Sat Flow, veh/h	3075	37	160	3040	1781	1585
Grp Volume(v), veh/h	1121	1181	11	1517	30	18
Grp Sat Flow(s),veh/h/ln	1481	1553	160	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.5	1.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	2.5	1.7
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1316	1379	190	2632	51	46
V/C Ratio(X)	0.85	0.86	0.06	0.58	0.58	0.39
Avail Cap(c_a), veh/h	1316	1379	190	2632	95	85
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.64	0.64	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	72.0	71.6
Incr Delay (d2), s/veh	0.7	0.7	0.4	0.6	10.1	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.2	1.3	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.7	0.7	0.4	0.6	82.1	77.0
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	2302			1528	48	
Approach Delay, s/veh	0.7			0.6	80.2	
Approach LOS	A			A	F	

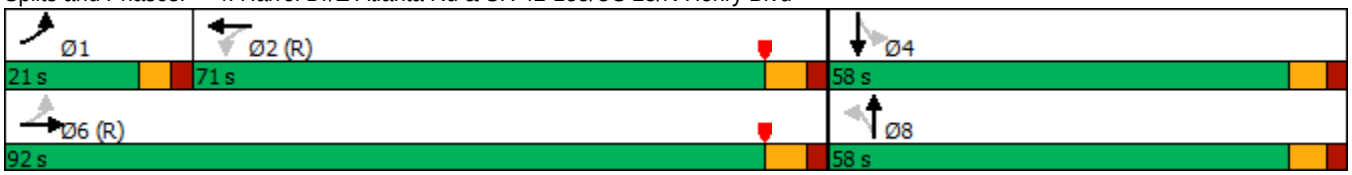
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		139.7		10.3		139.7
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		129.6		8.0		129.6
Max Q Clear Time (g_c+I1), s		2.0		4.5		2.0
Green Ext Time (p_c), s		55.7		0.0		113.2

Intersection Summary		
HCM 6th Ctrl Delay		1.6
HCM 6th LOS		A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	273	1768	18	1179	30	41	395	5
Future Volume (vph)	273	1768	18	1179	30	41	395	5
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	21.0	92.0	71.0	71.0	58.0	58.0	58.0	58.0
Total Split (%)	14.0%	61.3%	47.3%	47.3%	38.7%	38.7%	38.7%	38.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	86.0	84.9	63.9	63.9		51.3		51.3
Actuated g/C Ratio	0.57	0.57	0.43	0.43		0.34		0.34
v/c Ratio	1.43	1.11	0.39	1.29		0.30		1.43
Control Delay	237.5	65.3	57.4	169.7		35.0		242.5
Queue Delay	0.0	0.8	0.0	0.0		0.1		0.9
Total Delay	237.5	66.1	57.4	169.7		35.1		243.4
LOS	F	E	E	F		D		F
Approach Delay		88.8		168.4		35.1		243.4
Approach LOS		F		F		D		F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 146 (97%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 135.8	Intersection LOS: F
Intersection Capacity Utilization 124.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





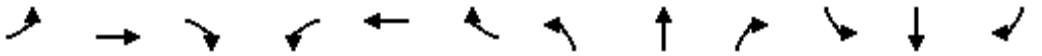
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	284	1858	19	1582	158	599
v/c Ratio	1.43	1.11	0.39	1.29	0.30	1.43
Control Delay	237.5	65.3	57.4	169.7	35.0	242.5
Queue Delay	0.0	0.8	0.0	0.0	0.1	0.9
Total Delay	237.5	66.1	57.4	169.7	35.1	243.4
Queue Length 50th (ft)	~327	~1081	13	~1011	104	~783
Queue Length 95th (ft)	m#203	m300	m26	#1157	167	#1024
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	198	1673	49	1225	526	419
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	342	0	0	47	38
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.43	1.40	0.39	1.29	0.33	1.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	1768	15	18	1179	340	30	41	81	395	5	176
Future Volume (veh/h)	273	1768	15	18	1179	340	30	41	81	395	5	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	284	1842	16	19	1228	354	31	43	84	411	5	183
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	205	1720	15	48	971	275	126	178	312	340	4	134
Arrive On Green	0.10	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1570	3038	26	247	2280	645	283	520	912	877	11	390
Grp Volume(v), veh/h	284	905	953	19	790	792	158	0	0	599	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1569	247	1481	1443	1715	0	0	1278	0	0
Q Serve(g_s), s	15.0	84.9	84.9	0.0	63.9	63.9	0.0	0.0	0.0	41.2	0.0	0.0
Cycle Q Clear(g_c), s	15.0	84.9	84.9	63.9	63.9	63.9	10.1	0.0	0.0	51.3	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.45	0.20		0.53	0.69		0.31
Lane Grp Cap(c), veh/h	205	846	888	48	631	615	615	0	0	478	0	0
V/C Ratio(X)	1.39	1.07	1.07	0.40	1.25	1.29	0.26	0.00	0.00	1.25	0.00	0.00
Avail Cap(c_a), veh/h	205	846	888	48	631	615	615	0	0	478	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.79	0.79	0.79	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.6	32.5	32.6	64.5	32.5	32.5	35.8	0.0	0.0	52.6	0.0	0.0
Incr Delay (d2), s/veh	176.3	34.1	35.1	18.2	123.4	139.6	0.2	0.0	0.0	130.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	37.2	39.3	1.0	41.9	43.6	4.3	0.0	0.0	35.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	225.9	66.7	67.7	82.6	155.9	172.1	36.0	0.0	0.0	183.3	0.0	0.0
LnGrp LOS	F	F	F	F	F	F	D	A	A	F	A	A
Approach Vol, veh/h		2142			1601			158			599	
Approach Delay, s/veh		88.2			163.1			36.0			183.3	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	21.0	71.0		58.0		92.0		58.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	15.0	63.9		51.3		84.9		51.3				
Max Q Clear Time (g_c+I1), s	17.0	65.9		53.3		86.9		12.1				
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0		1.1				

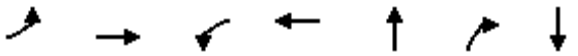
Intersection Summary												
HCM 6th Ctrl Delay			125.7									
HCM 6th LOS			F									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	2052	258	1288	203	62	231	15	60
Future Volume (vph)	30	2052	258	1288	203	62	231	15	60
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.6	94.3	114.0	106.2		22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.76	0.71		0.15	0.15		0.15
v/c Ratio	0.11	1.39	1.28	0.64		1.51	0.71		0.76
Control Delay	5.8	203.9	170.3	7.1		296.8	44.4		84.7
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.8	203.9	170.3	7.1		296.8	44.4		84.7
LOS	A	F	F	A		F	D		F
Approach Delay		201.5		33.9		179.1			84.7
Approach LOS		F		C		F			F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay: 139.6	Intersection LOS: F
Intersection Capacity Utilization 120.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





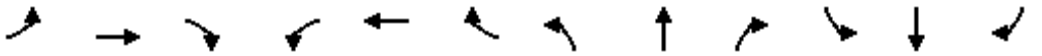
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	31	2474	263	1335	270	236	110
v/c Ratio	0.11	1.39	1.28	0.64	1.51	0.71	0.76
Control Delay	5.8	203.9	170.3	7.1	296.8	44.4	84.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	203.9	170.3	7.1	296.8	44.4	84.7
Queue Length 50th (ft)	7	~1693	~278	172	~366	119	93
Queue Length 95th (ft)	15	#1816	m#188	m132	#552	220	#199
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	284	1784	205	2090	179	332	145
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	1.39	1.28	0.64	1.51	0.71	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2052	372	258	1288	21	203	62	231	15	60	33
Future Volume (veh/h)	30	2052	372	258	1288	21	203	62	231	15	60	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	2094	380	263	1314	21	207	63	236	15	61	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	283	1553	273	204	2076	33	102	18	239	27	81	36
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2470	435	1795	3012	48	397	121	1585	0	537	240
Grp Volume(v), veh/h	31	1205	1269	263	652	683	270	0	236	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1451	1795	1495	1565	517	0	1585	778	0	0
Q Serve(g_s), s	0.9	94.3	94.3	13.0	36.1	36.1	0.0	0.0	22.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	94.3	94.3	13.0	36.1	36.1	22.6	0.0	22.3	22.6	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.03	0.77		1.00	0.14		0.31
Lane Grp Cap(c), veh/h	283	913	912	204	1030	1078	120	0	239	144	0	0
V/C Ratio(X)	0.11	1.32	1.39	1.29	0.63	0.63	2.24	0.00	0.99	0.76	0.00	0.00
Avail Cap(c_a), veh/h	308	913	912	204	1030	1078	120	0	239	144	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.6	27.9	27.9	57.4	12.9	12.9	67.7	0.0	63.6	58.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	151.5	182.5	134.7	0.3	0.3	585.5	0.0	54.9	24.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	67.7	75.5	15.1	11.5	12.0	24.2	0.0	12.6	4.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	179.3	210.4	192.1	13.1	13.1	653.1	0.0	118.5	82.4	0.0	0.0
LnGrp LOS	B	F	F	F	B	B	F	A	F	F	A	A
Approach Vol, veh/h		2505			1598			506			110	
Approach Delay, s/veh		193.0			42.6			403.8			82.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	110.0		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.9	38.1		24.6	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	30.5		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		162.1
HCM 6th LOS		F

Intersection	
Int Delay, s/veh	799.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	4	144	25	5	35	135	1317	37	38	2238	107
Future Vol, veh/h	34	4	144	25	5	35	135	1317	37	38	2238	107
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	35	4	150	26	5	36	141	1372	39	40	2331	111

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3438	4160	1221	2902	4176	686	2442	0	0	1411	0	0
Stage 1	2467	2467	-	1654	1654	-	-	-	-	-	-	-
Stage 2	971	1693	-	1248	2522	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	~ 2	172	~ 7	~ 2	390	189	-	-	479	-	-
Stage 1	~ 31	59	-	102	154	-	-	-	-	-	-	-
Stage 2	271	147	-	183	55	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 1	0	172	0	0	390	189	-	-	479	-	-
Mov Cap-2 Maneuver	~ 1	0	-	0	0	-	-	-	-	-	-	-
Stage 1	~ 8	54	-	~ 26	39	-	-	-	-	-	-	-
Stage 2	54	37	-	~ 20	50	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay	$ 18046.7	16.2	5.9	0.2
HCM LOS	F	C		

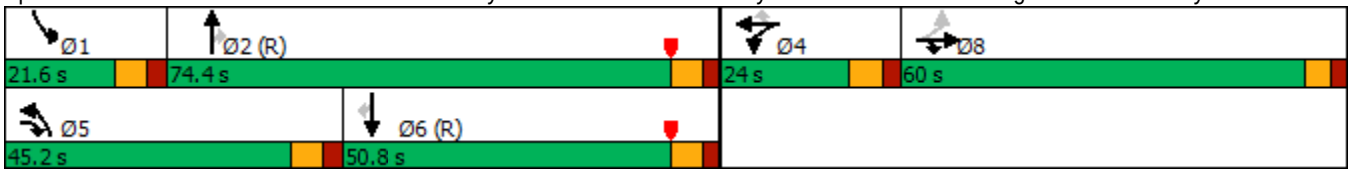
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	189	-	-	5	390	479	-	-
HCM Lane V/C Ratio	0.744	-	-	37.917	0.174	0.083	-	-
HCM Control Delay (s)	64.9	-	-	$ 18046.7	16.2	13.2	-	-
HCM Lane LOS	F	-	-	F	C	B	-	-
HCM 95th %tile Q(veh)	4.8	-	-	25.8	0.6	0.3	-	-

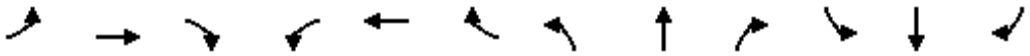
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	317	173	1478	125	172	126	852	494	71	70	795	170
Future Volume (vph)	317	173	1478	125	172	126	852	494	71	70	795	170
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	60.0	60.0		24.0	24.0	24.0	45.2	74.4	74.4	21.6	50.8	50.8
Total Split (%)	33.3%	33.3%		13.3%	13.3%	13.3%	25.1%	41.3%	41.3%	12.0%	28.2%	28.2%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	54.0	54.0	99.2	17.0	17.0	17.0	38.4	68.7	68.7	13.5	43.9	43.9
Actuated g/C Ratio	0.30	0.30	0.55	0.09	0.09	0.09	0.21	0.38	0.38	0.08	0.24	0.24
v/c Ratio	0.92	0.32	1.15	0.78	1.02	0.47	1.39	0.47	0.11	0.55	1.16	0.39
Control Delay	62.8	39.5	120.4	108.3	150.3	13.6	234.5	43.9	2.4	95.9	143.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	39.5	120.4	108.3	150.3	13.6	234.5	43.9	2.4	95.9	143.8	9.1
LOS	E	D	F	F	F	B	F	D	A	F	F	A
Approach Delay		104.0			97.2			156.4			118.4	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 121.8	Intersection LOS: F
Intersection Capacity Utilization 97.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





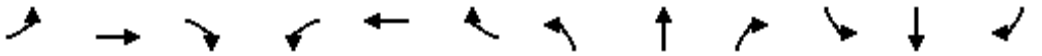
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	330	180	1540	130	179	131	888	515	74	73	828	177
v/c Ratio	0.92	0.32	1.15	0.78	1.02	0.47	1.39	0.47	0.11	0.55	1.16	0.39
Control Delay	62.8	39.5	120.4	108.3	150.3	13.6	234.5	43.9	2.4	95.9	143.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	39.5	120.4	108.3	150.3	13.6	234.5	43.9	2.4	95.9	143.8	9.1
Queue Length 50th (ft)	407	165	~1206	153	~223	0	~717	244	0	84	~604	0
Queue Length 95th (ft)	m402	m164	m#1162	#268	#394	57	#853	303	16	145	#744	70
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	360	558	1338	167	175	279	638	1102	667	144	715	454
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.32	1.15	0.78	1.02	0.47	1.39	0.47	0.11	0.51	1.16	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	173	1478	125	172	126	852	494	71	70	795	170
Future Volume (veh/h)	317	173	1478	125	172	126	852	494	71	70	795	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	330	180	1540	130	179	131	888	515	74	73	828	177
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.21	0.41	0.41	0.05	0.24	0.24
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	330	180	1540	130	179	131	888	515	74	73	828	177
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	32.0	16.1	54.0	12.8	17.0	14.7	38.4	23.0	5.2	7.3	43.9	21.1
Cycle Q Clear(g_c), s	32.0	16.1	54.0	12.8	17.0	14.7	38.4	23.0	5.2	7.3	43.9	21.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
V/C Ratio(X)	0.62	0.32	1.22	0.77	1.01	0.88	1.37	0.44	0.12	0.80	1.15	0.55
Avail Cap(c_a), veh/h	534	561	1262	168	177	150	650	1179	643	145	722	322
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	64.0	50.9	79.6	81.5	80.5	70.8	38.6	33.4	84.5	68.1	59.4
Incr Delay (d2), s/veh	0.2	0.0	99.9	20.2	71.2	40.1	174.9	1.2	0.4	34.6	81.5	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	8.2	40.5	6.9	11.8	7.6	30.5	8.4	2.1	4.2	24.5	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.4	64.1	150.8	99.8	152.7	120.5	245.7	39.8	33.7	119.1	149.5	66.0
LnGrp LOS	E	E	F	F	F	F	F	D	C	F	F	E
Approach Vol, veh/h		2050			440			1477			1078	
Approach Delay, s/veh		130.4			127.5			163.3			133.8	
Approach LOS		F			F			F			F	

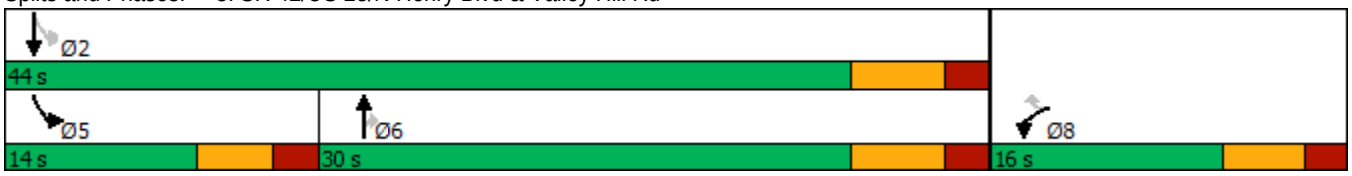
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	79.9		24.0	45.2	50.8		60.0				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	14.7	67.5		17.0	38.4	43.9		54.0				
Max Q Clear Time (g_c+I1), s	9.3	25.0		19.0	40.4	45.9		56.0				
Green Ext Time (p_c), s	0.1	7.9		0.0	0.0	0.0		0.0				

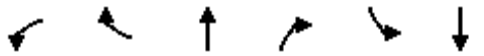
Intersection Summary			
HCM 6th Ctrl Delay		140.5	
HCM 6th LOS		F	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	139	135	737	119	317	1087
Future Volume (vph)	139	135	737	119	317	1087
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	30.0	30.0	14.0	44.0
Total Split (%)	26.7%	26.7%	50.0%	50.0%	23.3%	73.3%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.7	10.7	20.8	20.8	36.3	37.5
Actuated g/C Ratio	0.20	0.20	0.39	0.39	0.68	0.70
v/c Ratio	0.40	0.32	0.66	0.18	0.61	0.54
Control Delay	26.1	7.4	17.5	3.6	10.7	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	7.4	17.5	3.6	10.7	7.2
LOS	C	A	B	A	B	A
Approach Delay	16.9		15.6			8.0
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	142	138	752	121	323	1109
v/c Ratio	0.40	0.32	0.66	0.18	0.61	0.54
Control Delay	26.1	7.4	17.5	3.6	10.7	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	7.4	17.5	3.6	10.7	7.2
Queue Length 50th (ft)	46	0	110	0	41	103
Queue Length 95th (ft)	95	40	165	26	#80	155
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	364	435	1381	808	534	2096
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.32	0.54	0.15	0.60	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	139	135	737	119	317	1087
Future Volume (veh/h)	139	135	737	119	317	1087
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	142	0	752	121	323	1109
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	293		1078	577	494	1819
Arrive On Green	0.16	0.00	0.36	0.36	0.15	0.61
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	142	0	752	121	323	1109
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	3.9	0.0	11.5	2.8	5.3	12.3
Cycle Q Clear(g_c), s	3.9	0.0	11.5	2.8	5.3	12.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	293		1078	577	494	1819
V/C Ratio(X)	0.48		0.70	0.21	0.65	0.61
Avail Cap(c_a), veh/h	348		1323	708	516	2101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	0.0	14.5	11.7	9.7	6.3
Incr Delay (d2), s/veh	1.2	0.0	2.0	0.4	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	3.3	0.8	1.6	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.4	0.0	16.5	12.1	12.5	7.1
LnGrp LOS	C		B	B	B	A
Approach Vol, veh/h	142	A	873			1432
Approach Delay, s/veh	21.4		15.9			8.3
Approach LOS	C		B			A

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		38.9			13.3	25.6	14.4
Change Period (Y+Rc), s		6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s		37.8			8.6	23.8	10.4
Max Q Clear Time (g_c+I1), s		14.3			7.3	13.5	5.9
Green Ext Time (p_c), s		13.7			0.1	5.9	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

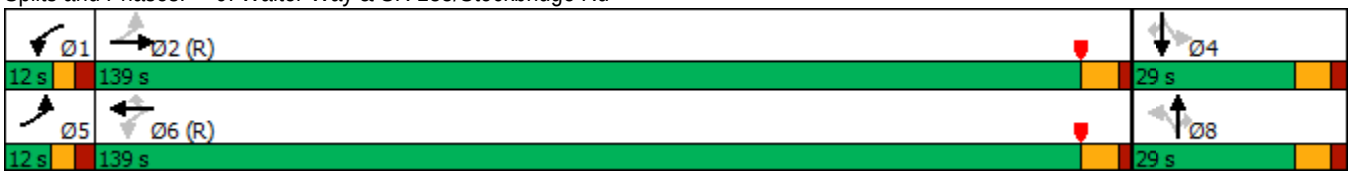
Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	2181	56	1343	25	95	5	97	10	7	24
Future Volume (vph)	23	2181	56	1343	25	95	5	97	10	7	24
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	12.0	139.0	12.0	139.0	139.0	29.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	6.7%	77.2%	6.7%	77.2%	77.2%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	143.0	135.9	145.8	140.8	140.8		18.2	18.2		18.2	18.2
Actuated g/C Ratio	0.79	0.76	0.81	0.78	0.78		0.10	0.10		0.10	0.10
v/c Ratio	0.08	1.03	0.57	0.59	0.02		0.78	0.47		0.12	0.12
Control Delay	1.7	25.5	64.7	9.4	0.0		112.7	38.2		73.4	1.1
Queue Delay	0.0	30.2	0.0	0.7	0.0		0.0	0.0		0.0	0.0
Total Delay	1.7	55.6	64.7	10.1	0.0		112.7	38.2		73.4	1.1
LOS	A	E	E	B	A		F	D		E	A
Approach Delay		55.1		12.1			76.0			31.4	
Approach LOS		E		B			E			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 171 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 40.4	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





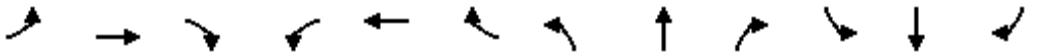
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	2376	59	1414	26	105	102	18	25
v/c Ratio	0.08	1.03	0.57	0.59	0.02	0.78	0.47	0.12	0.12
Control Delay	1.7	25.5	64.7	9.4	0.0	112.7	38.2	73.4	1.1
Queue Delay	0.0	30.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	55.6	64.7	10.1	0.0	112.7	38.2	73.4	1.1
Queue Length 50th (ft)	2	~1614	31	702	0	122	43	20	0
Queue Length 95th (ft)	m2	m#1555	m33	m574	m0	195	109	48	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	288	2318	105	2412	1251	163	247	179	243
Starvation Cap Reductn	0	163	0	588	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.10	0.56	0.78	0.02	0.64	0.41	0.10	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	2181	76	56	1343	25	95	5	97	10	7	24
Future Volume (veh/h)	23	2181	76	56	1343	25	95	5	97	10	7	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	2296	80	59	1414	26	100	5	102	11	7	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	354	2278	79	96	2335	1182	39	0	193	32	13	193
Arrive On Green	0.05	1.00	1.00	0.04	0.99	0.99	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3088	107	1781	3131	1585	0	0	1585	0	109	1585
Grp Volume(v), veh/h	24	1158	1218	59	1414	26	105	0	102	18	0	25
Grp Sat Flow(s),veh/h/ln	1781	1566	1629	1781	1566	1585	0	0	1585	109	0	1585
Q Serve(g_s), s	0.6	0.0	132.8	1.7	1.7	0.0	0.0	0.0	10.9	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.6	0.0	132.8	1.7	1.7	0.0	21.9	0.0	10.9	21.9	0.0	2.5
Prop In Lane	1.00		0.07	1.00		1.00	0.95		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	354	1155	1202	96	2335	1182	39	0	193	45	0	193
V/C Ratio(X)	0.07	1.00	1.01	0.61	0.61	0.02	2.69	0.00	0.53	0.40	0.00	0.13
Avail Cap(c_a), veh/h	374	1155	1202	102	2335	1182	39	0	193	45	0	193
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.1	0.0	0.0	55.6	0.2	0.2	90.0	0.0	74.2	74.4	0.0	70.5
Incr Delay (d2), s/veh	0.0	8.4	11.6	0.9	0.1	0.0	827.5	0.0	2.7	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	3.9	2.0	0.2	0.0	10.8	0.0	4.6	0.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	8.4	11.6	56.5	0.3	0.2	917.5	0.0	76.9	79.9	0.0	70.8
LnGrp LOS	A	F	F	E	A	A	F	A	E	E	A	E
Approach Vol, veh/h		2400			1499			207			43	
Approach Delay, s/veh		10.0			2.5			503.3			74.6	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	139.6		29.0	10.0	141.0		29.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 6.3	* 1.3E2		21.9	* 6.2	* 1.3E2		21.9				
Max Q Clear Time (g_c+I1), s	3.7	134.8		23.9	2.6	3.7		23.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	42.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		32.6
HCM 6th LOS		C

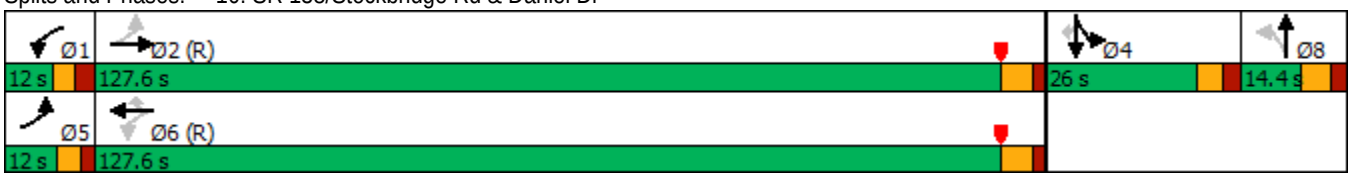
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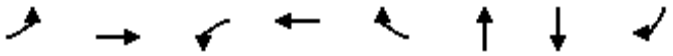
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	135	2146	9	1381	104	11	4	5	170
Future Volume (vph)	135	2146	9	1381	104	11	4	5	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	12.0	127.6	12.0	127.6	127.6	14.4	14.4	26.0	26.0
Total Split (%)	6.7%	70.9%	6.7%	70.9%	70.9%	8.0%	8.0%	14.4%	14.4%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	139.4	135.3	134.7	127.9	127.9		8.0	19.2	19.2
Actuated g/C Ratio	0.77	0.75	0.75	0.71	0.71		0.04	0.11	0.11
v/c Ratio	0.54	1.03	0.09	0.64	0.09		0.36	0.87	0.59
Control Delay	22.6	47.4	3.6	5.0	0.2		71.5	116.4	27.4
Queue Delay	0.0	28.9	0.0	0.5	0.0		0.0	0.0	3.4
Total Delay	22.6	76.2	3.6	5.5	0.2		71.5	116.4	30.8
LOS	C	E	A	A	A		E	F	C
Approach Delay		73.1		5.1			71.5	72.5	
Approach LOS		E		A			E	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 159 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 48.6	Intersection LOS: D
Intersection Capacity Utilization 95.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	138	2219	9	1409	106	25	164	173
v/c Ratio	0.54	1.03	0.09	0.64	0.09	0.36	0.87	0.59
Control Delay	22.6	47.4	3.6	5.0	0.2	71.5	116.4	27.4
Queue Delay	0.0	28.9	0.0	0.5	0.0	0.0	0.0	3.4
Total Delay	22.6	76.2	3.6	5.5	0.2	71.5	116.4	30.8
Queue Length 50th (ft)	50	~832	1	108	1	18	193	38
Queue Length 95th (ft)	m2	m23	m1	113	0	55	#326	126
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	257	2149	106	2191	1152	71	197	298
Starvation Cap Reductn	0	872	0	107	0	0	0	0
Spillback Cap Reductn	0	171	0	356	0	0	0	61
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.74	0.08	0.77	0.09	0.35	0.83	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	2146	28	9	1381	104	11	4	10	156	5	170
Future Volume (veh/h)	135	2146	28	9	1381	104	11	4	10	156	5	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	2190	29	9	1409	106	11	4	10	159	5	173
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	341	2068	27	62	2164	1095	24	9	22	192	6	176
Arrive On Green	0.07	1.00	1.00	0.02	1.00	1.00	0.03	0.03	0.03	0.11	0.11	0.11
Sat Flow, veh/h	1781	2908	38	1781	3131	1585	752	274	684	1729	54	1585
Grp Volume(v), veh/h	138	1081	1138	9	1409	106	25	0	0	164	0	173
Grp Sat Flow(s),veh/h/ln	1781	1439	1508	1781	1566	1585	1710	0	0	1784	0	1585
Q Serve(g_s), s	4.3	0.0	128.0	0.3	0.0	0.0	2.6	0.0	0.0	16.2	0.0	19.6
Cycle Q Clear(g_c), s	4.3	0.0	128.0	0.3	0.0	0.0	2.6	0.0	0.0	16.2	0.0	19.6
Prop In Lane	1.00		0.03	1.00		1.00	0.44		0.40	0.97		1.00
Lane Grp Cap(c), veh/h	341	1023	1072	62	2164	1095	54	0	0	198	0	176
V/C Ratio(X)	0.40	1.06	1.06	0.15	0.65	0.10	0.46	0.00	0.00	0.83	0.00	0.98
Avail Cap(c_a), veh/h	348	1023	1072	104	2164	1095	77	0	0	198	0	176
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.79	0.79	0.79	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	50.3	0.0	0.0	85.6	0.0	0.0	78.3	0.0	79.8
Incr Delay (d2), s/veh	0.1	28.0	29.9	0.9	1.2	0.1	6.0	0.0	0.0	24.2	0.0	62.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	8.0	8.9	0.3	0.4	0.0	1.3	0.0	0.0	8.9	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.0	28.0	29.9	51.2	1.2	0.1	91.6	0.0	0.0	102.5	0.0	142.2
LnGrp LOS	A	F	F	D	A	A	F	A	A	F	A	F
Approach Vol, veh/h		2357			1524			25			337	
Approach Delay, s/veh		27.7			1.4			91.6			122.9	
Approach LOS		C			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	134.3		26.0	11.3	130.7		12.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 1.2E2		20.0	7.0	* 1.2E2		8.1				
Max Q Clear Time (g_c+I1), s	2.3	130.0		21.6	6.3	2.0		4.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	43.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		26.2
HCM 6th LOS		C

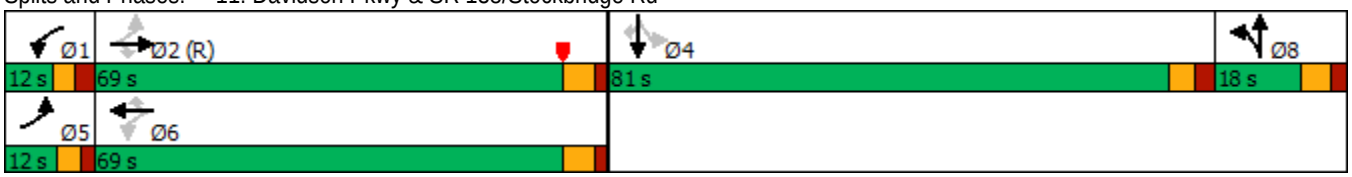
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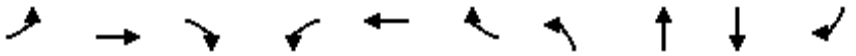
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	2166	460	51	1406	61	306	28	70	27	188
Future Volume (vph)	165	2166	460	51	1406	61	306	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	18.0	18.0	81.0	81.0	81.0
Total Split (%)	6.7%	38.3%	38.3%	6.7%	38.3%	38.3%	10.0%	10.0%	45.0%	45.0%	45.0%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	72.0	65.1	65.1	69.9	62.7	62.7	11.7	11.7		75.0	75.0
Actuated g/C Ratio	0.40	0.36	0.36	0.39	0.35	0.35	0.06	0.06		0.42	0.42
v/c Ratio	1.56	2.18	0.76	0.51	1.47	0.10	1.90	1.76		2.10	0.27
Control Delay	289.7	556.8	37.2	52.9	250.3	5.2	475.2	413.4		586.8	18.8
Queue Delay	0.0	1.4	18.9	0.0	0.5	0.0	0.0	0.2		17.6	0.0
Total Delay	289.7	558.2	56.1	52.9	250.9	5.2	475.2	413.6		604.4	18.8
LOS	F	F	E	D	F	A	F	F		F	B
Approach Delay		459.6			234.3			444.8		218.0	
Approach LOS		F			F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 96 (53%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.18	
Intersection Signal Delay: 376.0	Intersection LOS: F
Intersection Capacity Utilization 97.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	172	2256	479	53	1465	64	207	202	101	196
v/c Ratio	1.56	2.18	0.76	0.51	1.47	0.10	1.90	1.76	2.10	0.27
Control Delay	289.7	556.8	37.2	52.9	250.3	5.2	475.2	413.4	586.8	18.8
Queue Delay	0.0	1.4	18.9	0.0	0.5	0.0	0.0	0.2	17.6	0.0
Total Delay	289.7	558.2	56.1	52.9	250.9	5.2	475.2	413.6	604.4	18.8
Queue Length 50th (ft)	~235	~2275	397	28	~1232	3	~392	~363	~187	77
Queue Length 95th (ft)	m#183	m#1893	m310	m63	#1375	m16	#585	#555	#272	142
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	110	1035	632	105	997	610	109	115	48	713
Starvation Cap Reductn	0	69	151	0	0	0	0	0	0	0
Spillback Cap Reductn	0	242	0	0	98	0	0	1	17	2
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.56	2.84	1.00	0.50	1.63	0.10	1.90	1.77	3.26	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	2166	460	51	1406	61	306	28	59	70	27	188
Future Volume (veh/h)	165	2166	460	51	1406	61	306	28	59	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2256	0	53	1465	64	204	189	61	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	323	1818		95	1804	993	116	88	28	180	69	219
Arrive On Green	0.05	0.84	0.00	0.06	1.00	1.00	0.06	0.06	0.06	0.14	0.14	0.14
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	1781	1355	437	1305	500	1585
Grp Volume(v), veh/h	172	2256	0	53	1465	64	204	0	250	101	0	196
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	0	1792	1805	0	1585
Q Serve(g_s), s	6.6	113.7	0.0	1.9	0.0	0.0	11.7	0.0	11.7	9.2	0.0	21.9
Cycle Q Clear(g_c), s	6.6	113.7	0.0	1.9	0.0	0.0	11.7	0.0	11.7	9.2	0.0	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	0.72		1.00
Lane Grp Cap(c), veh/h	323	1818		95	1804	993	116	0	116	250	0	219
V/C Ratio(X)	0.53	1.24		0.56	0.81	0.06	1.76	0.00	2.15	0.40	0.00	0.89
Avail Cap(c_a), veh/h	323	1818		104	1804	993	116	0	116	752	0	660
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	14.4	0.0	44.7	0.0	0.0	84.2	0.0	84.2	70.8	0.0	76.3
Incr Delay (d2), s/veh	0.2	108.8	0.0	3.9	2.4	0.0	375.7	0.0	543.5	1.1	0.0	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	46.0	0.0	1.5	0.6	0.0	17.5	0.0	23.1	4.4	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	123.1	0.0	48.6	2.4	0.0	459.8	0.0	627.6	71.8	0.0	88.2
LnGrp LOS	B	F		D	A	A	F	A	F	E	A	F
Approach Vol, veh/h		2428	A		1582			454			297	
Approach Delay, s/veh		115.2			3.9			552.2			82.7	
Approach LOS		F			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	120.0		30.9	12.0	119.1		18.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 63		75.0	7.0	* 63		11.7				
Max Q Clear Time (g_c+I1), s	3.9	115.7		23.9	8.6	2.0		13.7				
Green Ext Time (p_c), s	0.0	0.0		1.0	0.0	34.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		117.9
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

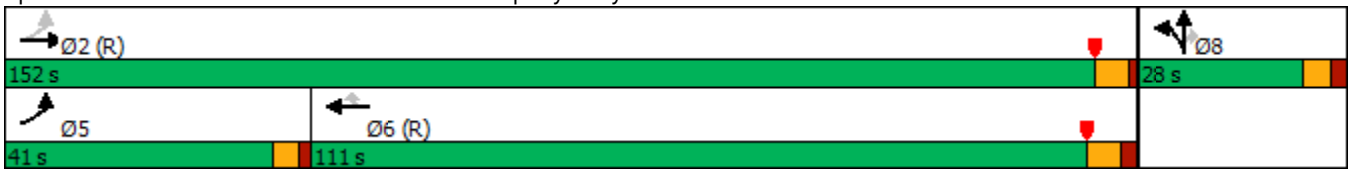
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	491	2619	1642	339	0	211
Future Volume (vph)	491	2619	1642	339	0	211
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	147.7	146.7	104.0	104.0	21.2	21.2
Actuated g/C Ratio	0.82	0.82	0.58	0.58	0.12	0.12
v/c Ratio	1.23	1.17	1.03	0.35	0.33	0.94
Control Delay	163.0	88.2	32.1	1.0	77.4	102.3
Queue Delay	0.0	3.2	27.3	1.4	0.0	54.6
Total Delay	163.0	91.3	59.4	2.5	77.4	156.9
LOS	F	F	E	A	E	F
Approach Delay		102.6	49.6		137.9	
Approach LOS		F	D		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 84.9	Intersection LOS: F
Intersection Capacity Utilization 111.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





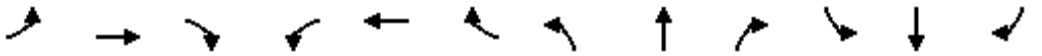
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	511	2728	1710	353	69	220
v/c Ratio	1.23	1.17	1.03	0.35	0.33	0.94
Control Delay	163.0	88.2	32.1	1.0	77.4	102.3
Queue Delay	0.0	3.2	27.3	1.4	0.0	54.6
Total Delay	163.0	91.3	59.4	2.5	77.4	156.9
Queue Length 50th (ft)	~685	~2014	~1161	38	76	200
Queue Length 95th (ft)	m413	m292	m166	m20	132	#370
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	414	2335	1655	1000	215	240
Starvation Cap Reductn	0	218	365	450	0	0
Spillback Cap Reductn	0	1387	0	0	0	100
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.23	2.88	1.33	0.64	0.32	1.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	491	2619	0	0	1642	339	66	0	211	0	0	0
Future Volume (veh/h)	491	2619	0	0	1642	339	66	0	211	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	511	2728	0	0	1710	353	69	0	220			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	396	2318	0	0	1663	916	217	0	193			
Arrive On Green	0.40	1.00	0.00	0.00	0.58	0.58	0.12	0.00	0.12			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	511	2728	0	0	1710	353	69	0	220			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	36.0	0.0	0.0	0.0	104.0	21.8	6.4	0.0	21.9			
Cycle Q Clear(g_c), s	36.0	0.0	0.0	0.0	104.0	21.8	6.4	0.0	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	396	2318	0	0	1663	916	217	0	193			
V/C Ratio(X)	1.29	1.18	0.00	0.00	1.03	0.39	0.32	0.00	1.14			
Avail Cap(c_a), veh/h	396	2334	0	0	1663	916	217	0	193			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.3	0.0	0.0	0.0	38.0	20.6	72.2	0.0	79.1			
Incr Delay (d2), s/veh	132.1	80.0	0.0	0.0	15.7	0.1	0.8	0.0	107.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	27.7	25.8	0.0	0.0	38.1	8.0	2.9	0.0	14.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	180.4	80.0	0.0	0.0	53.7	20.8	73.1	0.0	186.9			
LnGrp LOS	F	F	A	A	F	C	E	A	F			
Approach Vol, veh/h		3239			2063			289				
Approach Delay, s/veh		95.8			48.0			159.7				
Approach LOS		F			D			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		152.0			41.0	111.0		28.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			38.0	106.0		23.9				
Green Ext Time (p_c), s		135.0			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	81.5
HCM 6th LOS	F

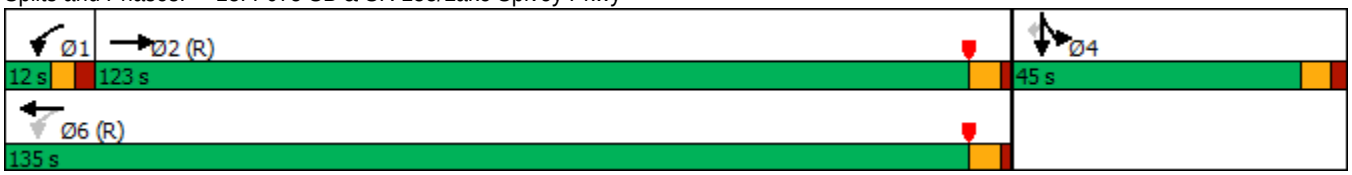
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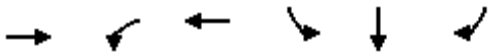
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2503	132	1575	636	0	795
Future Volume (vph)	2503	132	1575	636	0	795
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	1.43	1.35	0.79	0.91	0.91	1.38
Control Delay	220.4	205.1	12.9	98.2	98.2	228.8
Queue Delay	0.4	0.0	1.3	0.0	0.0	0.0
Total Delay	220.8	205.1	14.2	98.2	98.2	228.8
LOS	F	F	B	F	F	F
Approach Delay	220.8		28.9		170.8	
Approach LOS	F		C		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 151.0	Intersection LOS: F
Intersection Capacity Utilization 111.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





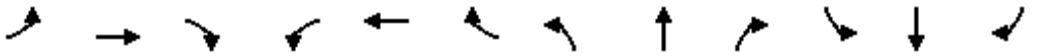
Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2662	136	1624	328	328	820
v/c Ratio	1.43	1.35	0.79	0.91	0.91	1.38
Control Delay	220.4	205.1	12.9	98.2	98.2	228.8
Queue Delay	0.4	0.0	1.3	0.0	0.0	0.0
Total Delay	220.8	205.1	14.2	98.2	98.2	228.8
Queue Length 50th (ft)	~2231	~162	262	404	404	~725
Queue Length 95th (ft)	m#2130	m#159	m255	#605	#605	#875
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1856	101	2054	359	359	596
Starvation Cap Reductn	0	0	77	0	0	0
Spillback Cap Reductn	214	0	229	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.62	1.35	0.89	0.91	0.91	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2503	80	132	1575	0	0	0	0	636	0	795
Future Volume (veh/h)	0	2503	80	132	1575	0	0	0	0	636	0	795
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2580	82	136	1624	0				656	0	820
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1852	59	100	2064	0				762	0	678
Arrive On Green	0.00	0.65	0.65	0.07	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2923	90	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1297	1365	136	1624	0				656	0	820
Grp Sat Flow(s),veh/h/ln	0	1439	1498	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	117.1	117.1	6.1	0.0	0.0				31.9	0.0	38.5
Cycle Q Clear(g_c), s	0.0	117.1	117.1	6.1	0.0	0.0				31.9	0.0	38.5
Prop In Lane	0.00		0.06	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	936	975	100	2064	0				762	0	678
V/C Ratio(X)	0.00	1.39	1.40	1.36	0.79	0.00				0.86	0.00	1.21
Avail Cap(c_a), veh/h	0	936	975	100	2064	0				762	0	678
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.5	31.5	60.8	0.0	0.0				68.2	0.0	70.8
Incr Delay (d2), s/veh	0.0	174.0	180.7	165.7	0.3	0.0				10.0	0.0	107.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	82.5	87.7	7.5	0.1	0.0				15.4	0.0	25.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	205.5	212.2	226.6	0.3	0.0				78.2	0.0	178.4
LnGrp LOS	A	F	F	F	A	A				E	A	F
Approach Vol, veh/h		2662			1760						1476	
Approach Delay, s/veh		208.9			17.8						133.8	
Approach LOS		F			B						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	8.1	119.1		40.5		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		57.0

Intersection Summary			
HCM 6th Ctrl Delay		133.1	
HCM 6th LOS		F	

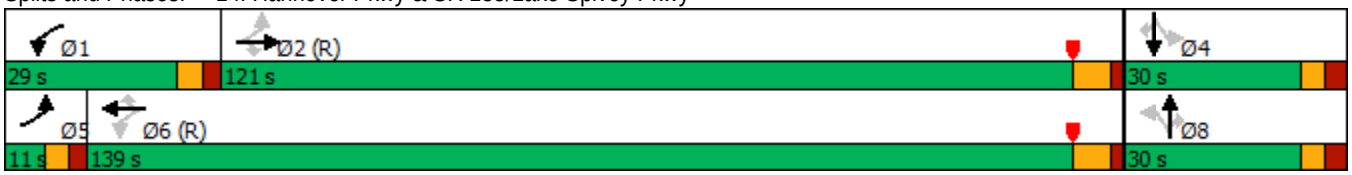
Notes

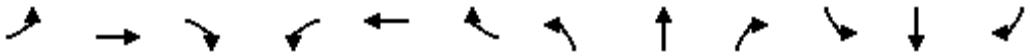
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	2183	47	197	1955	95	65	23	197	85	17	46
Future Volume (vph)	45	2183	47	197	1955	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.8	123.3	123.3	150.0	140.4	140.4	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.33	1.04	0.04	0.86	0.82	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	3.5	37.9	0.0	59.1	17.4	4.9	88.6	73.4	35.5	100.2	72.5	1.9
Queue Delay	0.0	25.4	0.0	0.0	10.3	0.0	0.0	0.0	58.5	46.4	0.0	0.0
Total Delay	3.5	63.3	0.0	59.1	27.7	4.9	88.6	73.4	94.0	146.6	72.5	1.9
LOS	A	E	A	E	C	A	F	E	F	F	E	A
Approach Delay		60.8			29.5			91.1			93.2	
Approach LOS		E			C			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 49.3	Intersection LOS: D
Intersection Capacity Utilization 98.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





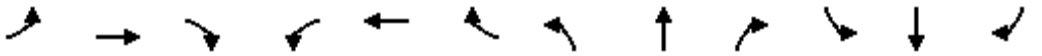
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2274	49	205	2036	99	68	24	205	89	18	48
v/c Ratio	0.33	1.04	0.04	0.86	0.82	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	3.5	37.9	0.0	59.1	17.4	4.9	88.6	73.4	35.5	100.2	72.5	1.9
Queue Delay	0.0	25.4	0.0	0.0	10.3	0.0	0.0	0.0	58.5	46.4	0.0	0.0
Total Delay	3.5	63.3	0.0	59.1	27.7	4.9	88.6	73.4	94.0	146.6	72.5	1.9
Queue Length 50th (ft)	7	~1544	0	188	541	15	78	26	61	103	20	0
Queue Length 95th (ft)	m7	m#1500	m0	m210	m678	m17	132	58	155	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	143	2188	1112	270	2491	1246	182	244	338	181	244	289
Starvation Cap Reductn	0	37	0	0	458	0	0	0	0	0	0	0
Spillback Cap Reductn	0	415	0	0	0	0	0	0	149	91	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	1.28	0.04	0.76	1.00	0.08	0.37	0.10	1.08	0.99	0.07	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	2183	47	197	1955	95	65	23	197	85	17	46
Future Volume (veh/h)	45	2183	47	197	1955	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2274	49	205	2036	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	208	2329	1138	230	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.06	0.99	0.99	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2274	49	205	2036	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.3	0.0	0.0	5.7	7.4	0.1	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.3	0.0	0.0	5.7	7.4	0.1	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	2329	1138	230	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.23	0.98	0.04	0.89	0.84	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	226	2329	1138	380	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.12	0.12	0.12	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.2	0.0	0.0	16.3	0.3	0.2	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.0	2.4	0.0	1.1	0.5	0.0	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.0	4.3	0.6	0.0	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	2.4	0.0	17.4	0.8	0.3	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	A	A	B	A	A	E	E	F	E	E	E
Approach Vol, veh/h		2370			2340			297			155	
Approach Delay, s/veh		2.4			2.2			116.6			75.1	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	136.1		30.0	9.2	140.8		30.0				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24				
Max Q Clear Time (g_c+I1), s	7.7	2.0		17.3	3.3	9.4		25.2				
Green Ext Time (p_c), s	0.2	93.6		0.4	0.0	88.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

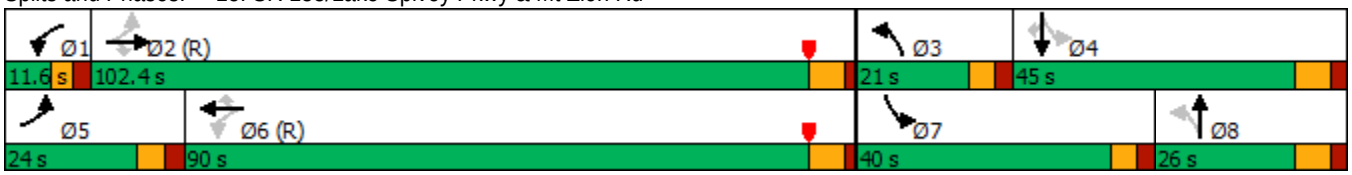
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	239	1727	168	47	1538	416	148	87	430	79	237
Future Volume (vph)	239	1727	168	47	1538	416	148	87	430	79	237
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	109.1	99.5	99.5	90.7	83.6	83.6	33.0	17.5	58.6	37.2	37.2
Actuated g/C Ratio	0.61	0.55	0.55	0.50	0.46	0.46	0.18	0.10	0.33	0.21	0.21
v/c Ratio	1.11	1.04	0.19	0.49	1.10	0.52	0.57	0.75	1.10	0.22	0.55
Control Delay	131.1	56.6	7.7	33.7	93.0	15.3	56.2	97.3	122.4	60.8	25.4
Queue Delay	0.0	24.7	0.0	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.1
Total Delay	131.1	81.3	7.7	33.7	93.2	15.3	56.2	97.3	123.9	60.8	25.4
LOS	F	F	A	C	F	B	E	F	F	E	C
Approach Delay		81.1			75.6			75.3		86.0	
Approach LOS		F			E			E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 79.3	Intersection LOS: E
Intersection Capacity Utilization 108.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





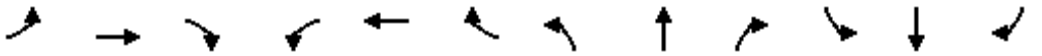
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	254	1837	179	50	1636	443	157	136	457	84	252
v/c Ratio	1.11	1.04	0.19	0.49	1.10	0.52	0.57	0.75	1.10	0.22	0.55
Control Delay	131.1	56.6	7.7	33.7	93.0	15.3	56.2	97.3	122.4	60.8	25.4
Queue Delay	0.0	24.7	0.0	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.1
Total Delay	131.1	81.3	7.7	33.7	93.2	15.3	56.2	97.3	123.9	60.8	25.4
Queue Length 50th (ft)	~316	~1263	26	21	~1152	100	136	147	~494	83	85
Queue Length 95th (ft)	m#339	m#1309	m32	m31	#1281	180	203	#239	#728	139	186
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	228	1767	934	102	1483	848	282	195	416	392	466
Starvation Cap Reductn	0	59	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	213	0	0	80	0	0	0	39	0	7
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	1.18	0.19	0.49	1.17	0.52	0.56	0.70	1.21	0.21	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	1727	168	47	1538	416	148	87	40	430	79	237
Future Volume (veh/h)	239	1727	168	47	1538	416	148	87	40	430	79	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	254	1837	179	50	1636	443	157	93	43	457	84	252
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	215	1794	876	196	1560	762	281	107	50	393	363	308
Arrive On Green	0.20	1.00	1.00	0.06	0.96	0.96	0.08	0.09	0.09	0.19	0.19	0.19
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	1781	1870	1585
Grp Volume(v), veh/h	254	1837	179	50	1636	443	157	0	136	457	84	252
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	17.7	0.0	0.0	2.5	86.5	4.4	14.4	0.0	13.7	34.0	6.8	27.4
Cycle Q Clear(g_c), s	17.7	0.0	0.0	2.5	86.5	4.4	14.4	0.0	13.7	34.0	6.8	27.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	215	1794	876	196	1560	762	281	0	157	393	363	308
V/C Ratio(X)	1.18	1.02	0.20	0.25	1.05	0.58	0.56	0.00	0.87	1.16	0.23	0.82
Avail Cap(c_a), veh/h	215	1794	876	202	1560	762	281	0	186	393	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.20	0.51	0.51	0.51	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	0.0	0.0	21.4	3.5	1.9	67.7	0.0	81.0	60.0	61.2	69.5
Incr Delay (d2), s/veh	91.0	16.5	0.1	0.3	31.0	1.7	2.5	0.0	33.9	98.3	0.7	16.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	4.1	0.0	1.1	8.1	1.1	6.9	0.0	7.8	26.9	3.3	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.9	16.5	0.1	21.8	34.5	3.5	70.1	0.0	114.9	158.3	61.9	85.7
LnGrp LOS	F	F	A	C	F	A	E	A	F	F	E	F
Approach Vol, veh/h		2270			2129			293			793	
Approach Delay, s/veh		29.9			27.7			90.9			125.0	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	105.9	21.0	42.1	24.0	92.9	40.0	23.1
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.5	2.0	16.4	29.4	19.7	88.5	36.0	15.7
Green Ext Time (p_c), s	0.0	65.4	0.0	1.6	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

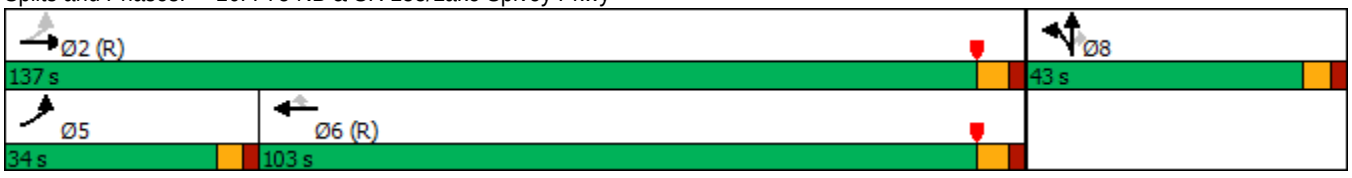
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	320	2164	1495	572	0	191
Future Volume (vph)	320	2164	1495	572	0	191
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	136.1	134.7	99.8	99.8	32.3	32.3
Actuated g/C Ratio	0.76	0.75	0.55	0.55	0.18	0.18
v/c Ratio	1.01	0.98	0.92	0.60	0.90	0.63
Control Delay	76.3	41.8	21.3	1.7	101.9	57.3
Queue Delay	0.0	40.9	45.8	0.4	6.8	0.1
Total Delay	76.3	82.7	67.1	2.1	108.7	57.3
LOS	E	F	E	A	F	E
Approach Delay		81.9	49.1		87.0	
Approach LOS		F	D		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 68.8	Intersection LOS: E
Intersection Capacity Utilization 108.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy



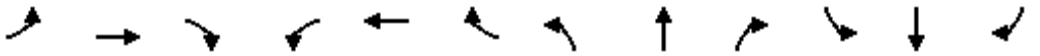


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	348	2352	1625	622	285	208
v/c Ratio	1.01	0.98	0.92	0.60	0.90	0.63
Control Delay	76.3	41.8	21.3	1.7	101.9	57.3
Queue Delay	0.0	40.9	45.8	0.4	6.8	0.1
Total Delay	76.3	82.7	67.1	2.1	108.7	57.3
Queue Length 50th (ft)	339	1311	998	3	331	167
Queue Length 95th (ft)	m#391	m1192	m917	m6	#456	259
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	348	2391	1771	1030	362	369
Starvation Cap Reductn	0	452	125	115	0	0
Spillback Cap Reductn	0	228	390	0	45	3
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.00	1.21	1.18	0.68	0.90	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	2164	0	0	1495	572	262	0	191	0	0	0
Future Volume (veh/h)	320	2164	0	0	1495	572	262	0	191	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	348	2352	0	0	1625	0	285	0	208			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	388	2449	0	0	2079		308	0	274			
Arrive On Green	0.11	1.00	0.00	0.00	1.00	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	348	2352	0	0	1625	0	285	0	208			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	12.2	0.0	0.0	0.0	0.0	0.0	28.4	0.0	22.5			
Cycle Q Clear(g_c), s	12.2	0.0	0.0	0.0	0.0	0.0	28.4	0.0	22.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	388	2449	0	0	2079		308	0	274			
V/C Ratio(X)	0.90	0.96	0.00	0.00	0.78		0.93	0.00	0.76			
Avail Cap(c_a), veh/h	521	2449	0	0	2079		365	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.11	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	11.8	0.0	0.0	0.0	0.0	0.0	73.3	0.0	70.9			
Incr Delay (d2), s/veh	1.7	1.5	0.0	0.0	0.3	0.0	24.9	0.0	6.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.2	0.5	0.0	0.0	0.1	0.0	14.8	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	1.5	0.0	0.0	0.3	0.0	98.2	0.0	77.5			
LnGrp LOS	B	A	A	A	A		F	A	E			
Approach Vol, veh/h		2700			1625	A		493				
Approach Delay, s/veh		3.0			0.3			89.5				
Approach LOS		A			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		142.8			20.6	122.2		37.2				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			14.2	2.0		30.4				
Green Ext Time (p_c), s		107.4			0.9	49.4		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

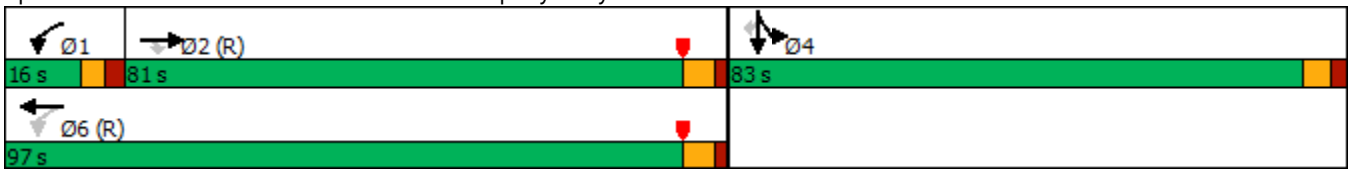
Notes

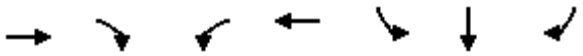
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1488	328	192	1662	997	0	846
Future Volume (vph)	1488	328	192	1662	997	0	846
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	91.2	90.7	76.8	76.8	76.8
Actuated g/C Ratio	0.42	0.42	0.51	0.50	0.43	0.43	0.43
v/c Ratio	1.19	0.41	1.44	1.10	0.74	0.74	1.27
Control Delay	132.0	5.2	250.2	80.1	50.8	50.9	173.9
Queue Delay	0.0	0.0	0.0	0.8	58.3	58.3	0.0
Total Delay	132.0	5.2	250.2	80.9	109.1	109.1	173.9
LOS	F	A	F	F	F	F	F
Approach Delay	109.1			98.4		138.8	
Approach LOS	F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 115.5	Intersection LOS: F
Intersection Capacity Utilization 108.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





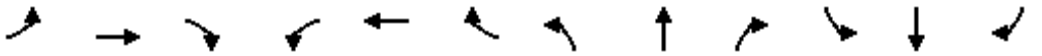
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1583	349	204	1768	530	531	900
v/c Ratio	1.19	0.41	1.44	1.10	0.74	0.74	1.27
Control Delay	132.0	5.2	250.2	80.1	50.8	50.9	173.9
Queue Delay	0.0	0.0	0.0	0.8	58.3	58.3	0.0
Total Delay	132.0	5.2	250.2	80.9	109.1	109.1	173.9
Queue Length 50th (ft)	~1181	53	~271	~1245	550	551	~1302
Queue Length 95th (ft)	m#1314	m66	m#335	#1382	714	717	#1572
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	861	142	1609	717	717	706
Starvation Cap Reductn	0	0	0	128	0	0	0
Spillback Cap Reductn	0	0	0	0	429	429	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.41	1.44	1.19	1.84	1.84	1.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1488	328	192	1662	0	0	0	0	997	0	846
Future Volume (veh/h)	0	1488	328	192	1662	0	0	0	0	997	0	846
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1583	349	204	1768	0				1061	0	900
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1346	658	141	1635	0				1520	0	676
Arrive On Green	0.00	0.83	0.83	0.06	0.50	0.00				0.43	0.00	0.43
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1583	349	204	1768	0				1061	0	900
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	74.7	12.0	10.2	90.7	0.0				43.8	0.0	76.8
Cycle Q Clear(g_c), s	0.0	74.7	12.0	10.2	90.7	0.0				43.8	0.0	76.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1346	658	141	1635	0				1520	0	676
V/C Ratio(X)	0.00	1.18	0.53	1.45	1.08	0.00				0.70	0.00	1.33
Avail Cap(c_a), veh/h	0	1346	658	141	1635	0				1520	0	676
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.33	0.33	0.28	0.28	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.3	10.0	57.0	44.6	0.0				42.1	0.0	51.6
Incr Delay (d2), s/veh	0.0	82.0	1.0	212.3	40.4	0.0				1.4	0.0	158.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	21.0	3.0	14.8	44.1	0.0				18.9	0.0	58.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	97.3	11.0	269.3	85.1	0.0				43.6	0.0	210.5
LnGrp LOS	A	F	B	F	F	A				D	A	F
Approach Vol, veh/h		1932			1972						1961	
Approach Delay, s/veh		81.7			104.1						120.2	
Approach LOS		F			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	81.0		83.0		97.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	12.2	76.7		78.8		92.7
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		102.1
HCM 6th LOS		F

Notes

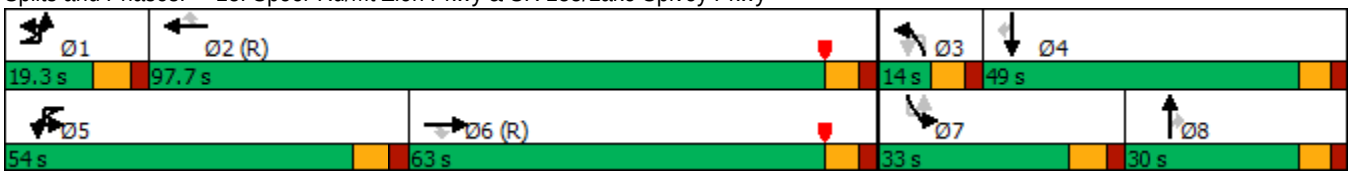
User approved volume balancing among the lanes for turning movement.

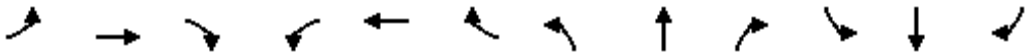
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	902	132	811	1105	310	82	194	320	442	401	181
Future Volume (vph)	159	902	132	811	1105	310	82	194	320	442	401	181
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	13.4	60.0	60.0	49.5	96.1	96.1	7.1	16.2	16.2	25.6	35.2	35.2
Actuated g/C Ratio	0.07	0.33	0.33	0.28	0.53	0.53	0.04	0.09	0.09	0.14	0.20	0.20
v/c Ratio	0.65	0.91	0.21	0.90	0.68	0.33	0.64	0.64	0.75	0.95	0.61	0.43
Control Delay	92.4	62.7	6.8	69.5	34.2	4.9	105.8	88.2	17.7	105.4	69.8	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.4	62.7	6.8	69.5	34.2	4.9	105.8	88.2	17.7	105.4	69.8	13.7
LOS	F	E	A	E	C	A	F	F	B	F	E	B
Approach Delay		60.4			43.0			52.7			75.2	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 54.8	Intersection LOS: D
Intersection Capacity Utilization 103.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy



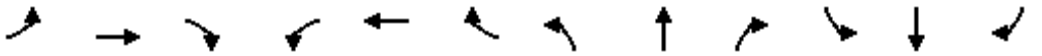


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	167	949	139	854	1163	326	86	204	337	465	422	191
v/c Ratio	0.65	0.91	0.21	0.90	0.68	0.33	0.64	0.64	0.75	0.95	0.61	0.43
Control Delay	92.4	62.7	6.8	69.5	34.2	4.9	105.8	88.2	17.7	105.4	69.8	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.4	62.7	6.8	69.5	34.2	4.9	105.8	88.2	17.7	105.4	69.8	13.7
Queue Length 50th (ft)	85	515	19	510	480	34	52	125	0	285	244	21
Queue Length 95th (ft)	136	#724	52	m439	m416	m16	#89	168	108	#400	295	96
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	261	1038	660	951	1706	997	135	460	498	489	833	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.91	0.21	0.90	0.68	0.33	0.64	0.44	0.68	0.95	0.51	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	902	132	811	1105	310	82	194	320	442	401	181
Future Volume (veh/h)	159	902	132	811	1105	310	82	194	320	442	401	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	167	949	139	854	1163	326	86	204	337	465	422	191
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	203	992	498	881	1655	809	122	462	206	491	852	380
Arrive On Green	0.12	0.63	0.63	0.43	0.85	0.85	0.04	0.13	0.13	0.14	0.24	0.24
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	167	949	139	854	1163	326	86	204	337	465	422	191
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	8.5	50.4	7.1	43.5	23.8	8.3	4.4	9.5	23.4	24.0	18.4	18.8
Cycle Q Clear(g_c), s	8.5	50.4	7.1	43.5	23.8	8.3	4.4	9.5	23.4	24.0	18.4	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	992	498	881	1655	809	122	462	206	491	852	380
V/C Ratio(X)	0.82	0.96	0.28	0.97	0.70	0.40	0.70	0.44	1.64	0.95	0.50	0.50
Avail Cap(c_a), veh/h	227	992	498	893	1655	809	136	462	206	491	852	380
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.5	32.4	24.3	51.0	8.3	7.1	85.9	72.3	78.3	76.5	59.0	59.2
Incr Delay (d2), s/veh	15.5	16.5	1.1	4.1	0.2	0.1	13.5	0.7	306.9	27.6	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	15.9	2.6	17.0	4.2	2.2	2.2	4.4	27.0	12.5	8.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.1	48.9	25.4	55.1	8.5	7.3	99.4	72.9	385.2	104.1	59.5	60.2
LnGrp LOS	F	D	C	E	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1255			2343			627			1078	
Approach Delay, s/veh		52.3			25.3			244.4			78.8	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	98.9	13.3	49.7	53.4	63.6	33.0	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	10.5	25.8	6.4	20.8	45.5	52.4	26.0	25.4
Green Ext Time (p_c), s	0.1	30.3	0.0	3.2	0.4	2.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.5
HCM 6th LOS	E

Notes

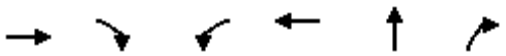
User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	912	60	376	933	0	213
Future Volume (vph)	912	60	376	933	0	213
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	44.0	44.0	25.0	69.0	21.0	21.0
Total Split (%)	48.9%	48.9%	27.8%	76.7%	23.3%	23.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	46.0	46.0	68.2	67.4	9.1	9.1
Actuated g/C Ratio	0.51	0.51	0.76	0.75	0.10	0.10
v/c Ratio	0.60	0.07	0.75	0.42	0.12	0.62
Control Delay	19.0	0.6	32.9	3.3	37.3	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	0.6	32.9	3.3	37.3	13.2
LOS	B	A	C	A	D	B
Approach Delay	17.8			11.8	15.3	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	960	63	396	982	22	224
v/c Ratio	0.60	0.07	0.75	0.42	0.12	0.62
Control Delay	19.0	0.6	32.9	3.3	37.3	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	0.6	32.9	3.3	37.3	13.2
Queue Length 50th (ft)	190	0	250	108	12	0
Queue Length 95th (ft)	314	4	357	167	33	63
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1589	866	588	2329	286	445
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.07	0.67	0.42	0.08	0.50

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	0	912	60	376	933	0	21	0	213	0	0
Future Volume (veh/h)	0	0	912	60	376	933	0	21	0	213	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		0	1663	1870	1870	1663	0	1900	1900	1900		
Adj Flow Rate, veh/h		0	960	63	396	982	0	22	0	224		
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %		0	16	2	2	16	0	0	0	0		
Cap, veh/h		0	1512	759	480	2186	0	286	0	254		
Arrive On Green		0.00	0.48	0.48	0.29	1.00	0.00	0.16	0.00	0.16		
Sat Flow, veh/h		0	3243	1585	1781	3243	0	1810	0	1610		
Grp Volume(v), veh/h		0	960	63	396	982	0	22	0	224		
Grp Sat Flow(s),veh/h/ln		0	1580	1585	1781	1580	0	1810	0	1610		
Q Serve(g_s), s		0.0	20.5	1.9	10.5	0.0	0.0	0.9	0.0	12.2		
Cycle Q Clear(g_c), s		0.0	20.5	1.9	10.5	0.0	0.0	0.9	0.0	12.2		
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00		
Lane Grp Cap(c), veh/h		0	1512	759	480	2186	0	286	0	254		
V/C Ratio(X)		0.00	0.63	0.08	0.83	0.45	0.00	0.08	0.00	0.88		
Avail Cap(c_a), veh/h		0	1512	759	594	2186	0	288	0	256		
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)		0.00	1.00	1.00	0.72	0.72	0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh		0.0	17.6	12.7	11.6	0.0	0.0	32.3	0.0	37.1		
Incr Delay (d2), s/veh		0.0	2.0	0.2	5.7	0.5	0.0	0.1	0.0	27.7		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		0.0	7.0	0.7	2.9	0.1	0.0	0.4	0.0	6.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	19.6	13.0	17.2	0.5	0.0	32.4	0.0	64.7		
LnGrp LOS		A	B	B	B	A	A	C	A	E		
Approach Vol, veh/h			1023			1378			246			
Approach Delay, s/veh			19.2			5.3			61.9			
Approach LOS			B			A			E			

Timer - Assigned Phs	2			5	6		8				
Phs Duration (G+Y+Rc), s	69.1			19.2	49.9		20.9				
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7				
Max Green Setting (Gmax), s	62.2			19.0	37.2		14.3				
Max Q Clear Time (g_c+I1), s	2.0			12.5	22.5		14.2				
Green Ext Time (p_c), s	23.8			0.7	10.3		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(I)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	27.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	129	491	338	67	102	214
Future Vol, veh/h	129	491	338	67	102	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	143	546	376	74	113	238

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	450	0	-	0	1245	413
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	832	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1121	-	-	-	192	639
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1121	-	-	-	157	639
Mov Cap-2 Maneuver	-	-	-	-	157	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	427	-

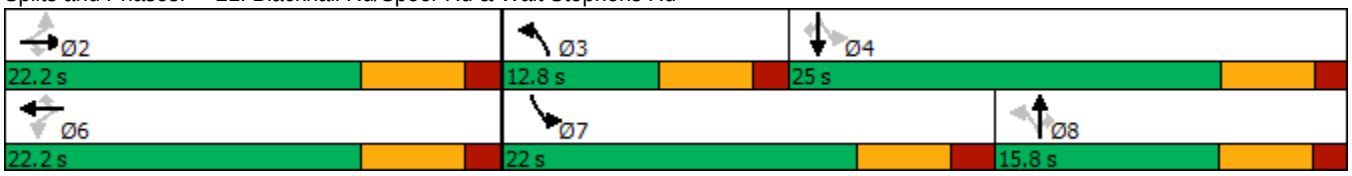
Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	114.6
HCM LOS			F

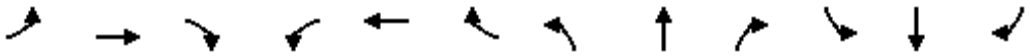
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1121	-	-	-	321
HCM Lane V/C Ratio	0.128	-	-	-	1.094
HCM Control Delay (s)	8.7	0	-	-	114.6
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	13.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	479	88	126	343	316	48	195	107	734	475	21
Future Volume (vph)	33	479	88	126	343	316	48	195	107	734	475	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	17.0	10.0	10.0	31.6	24.4	24.4
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.28	0.17	0.17	0.53	0.41	0.41
v/c Ratio	0.17	0.97	0.14	1.02	0.69	0.48	0.13	0.64	0.22	1.11	0.63	0.03
Control Delay	19.7	59.7	0.5	115.7	28.9	5.4	9.7	34.3	1.0	86.2	22.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	59.7	0.5	115.7	28.9	5.4	9.7	34.3	1.0	86.2	22.1	0.0
LOS	B	E	A	F	C	A	A	C	A	F	C	A
Approach Delay		48.8			33.4			20.8			60.0	
Approach LOS		D			C			C			E	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 60		
Natural Cycle: 90		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.11		
Intersection Signal Delay: 46.0	Intersection LOS: D	
Intersection Capacity Utilization 108.7%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd



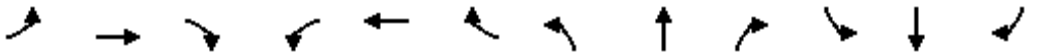


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	484	89	127	346	319	48	197	108	741	480	21
v/c Ratio	0.17	0.97	0.14	1.02	0.69	0.48	0.13	0.64	0.22	1.11	0.63	0.03
Control Delay	19.7	59.7	0.5	115.7	28.9	5.4	9.7	34.3	1.0	86.2	22.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	59.7	0.5	115.7	28.9	5.4	9.7	34.3	1.0	86.2	22.1	0.0
Queue Length 50th (ft)	9	173	0	~47	112	0	8	67	0	~232	156	0
Queue Length 95th (ft)	29	#342	0	#141	#215	51	20	#142	0	#427	#298	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	193	498	621	125	498	658	358	310	495	667	758	742
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.97	0.14	1.02	0.69	0.48	0.13	0.64	0.22	1.11	0.63	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	479	88	126	343	316	48	195	107	734	475	21
Future Volume (veh/h)	33	479	88	126	343	316	48	195	107	734	475	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	484	89	127	346	319	48	197	108	741	480	21
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	198	500	423	129	500	423	374	312	264	663	697	590
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.37	0.37
Sat Flow, veh/h	777	1885	1598	846	1885	1598	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	484	89	127	346	319	48	197	108	741	480	21
Grp Sat Flow(s),veh/h/ln	777	1885	1598	846	1885	1598	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.4	15.2	2.6	0.7	9.9	11.0	1.3	5.9	3.7	15.8	13.0	0.5
Cycle Q Clear(g_c), s	12.3	15.2	2.6	15.9	9.9	11.0	1.3	5.9	3.7	15.8	13.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	500	423	129	500	423	374	312	264	663	697	590
V/C Ratio(X)	0.17	0.97	0.21	0.98	0.69	0.75	0.13	0.63	0.41	1.12	0.69	0.04
Avail Cap(c_a), veh/h	198	500	423	129	500	423	468	312	264	663	697	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	21.8	17.2	30.0	19.8	20.3	18.2	23.3	22.4	15.7	15.9	12.0
Incr Delay (d2), s/veh	0.8	32.6	0.5	73.5	5.2	8.8	0.2	4.1	1.0	72.1	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	10.2	0.9	4.3	4.4	4.5	0.5	2.6	1.3	19.0	5.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	54.4	17.7	103.5	25.1	29.1	18.4	27.4	23.4	87.8	18.8	12.0
LnGrp LOS	C	D	B	F	C	C	B	C	C	F	B	B
Approach Vol, veh/h		606			792			353			1242	
Approach Delay, s/veh		47.5			39.3			24.9			59.8	
Approach LOS		D			D			C			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.7	28.1		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		17.2	3.3	15.0		17.9	17.8	7.9				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

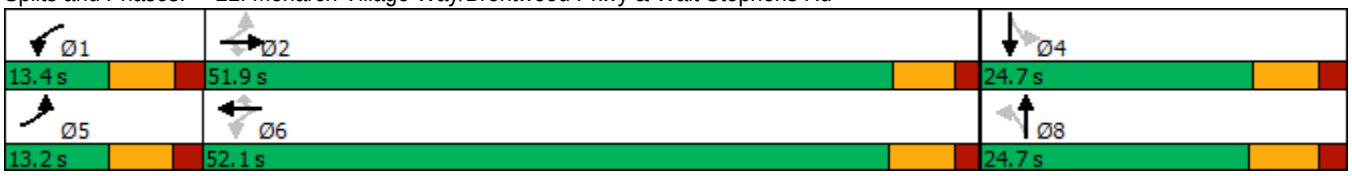
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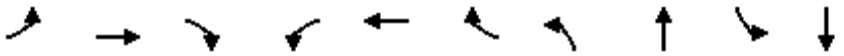
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	83	1039	102	28	592	97	82	15	75	15
Future Volume (vph)	83	1039	102	28	592	97	82	15	75	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	51.9	51.9	13.4	52.1	52.1	24.7	24.7	24.7	24.7
Total Split (%)	14.7%	57.7%	57.7%	14.9%	57.9%	57.9%	27.4%	27.4%	27.4%	27.4%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	52.1	51.3	51.3	49.3	45.4	45.4	11.5	11.5	11.8	11.8
Actuated g/C Ratio	0.69	0.68	0.68	0.66	0.60	0.60	0.15	0.15	0.16	0.16
v/c Ratio	0.16	0.82	0.09	0.11	0.53	0.10	0.41	0.19	0.36	0.26
Control Delay	5.3	22.0	1.8	5.6	14.6	1.7	37.4	15.8	35.5	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	22.0	1.8	5.6	14.6	1.7	37.4	15.8	35.5	13.7
LOS	A	C	A	A	B	A	D	B	D	B
Approach Delay		19.2			12.5			28.8		24.4
Approach LOS		B			B			C		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 75.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 87.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd

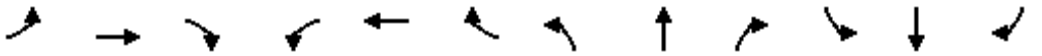




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	1049	103	28	598	98	83	55	76	79
v/c Ratio	0.16	0.82	0.09	0.11	0.53	0.10	0.41	0.19	0.36	0.26
Control Delay	5.3	22.0	1.8	5.6	14.6	1.7	37.4	15.8	35.5	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	22.0	1.8	5.6	14.6	1.7	37.4	15.8	35.5	13.7
Queue Length 50th (ft)	10	274	0	3	183	0	32	6	29	6
Queue Length 95th (ft)	28	#881	18	13	323	16	84	39	78	45
Internal Link Dist (ft)		2243			6582			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	527	1283	1128	258	1283	1128	319	432	331	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.82	0.09	0.11	0.47	0.09	0.26	0.13	0.23	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1039	102	28	592	97	82	15	40	75	15	63
Future Volume (veh/h)	83	1039	102	28	592	97	82	15	40	75	15	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1049	103	28	598	98	83	15	40	76	15	64
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	483	1095	928	192	1035	877	210	60	161	232	42	177
Arrive On Green	0.07	0.58	0.58	0.04	0.55	0.55	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1795	1885	1598	1795	1885	1598	1320	451	1203	1349	310	1322
Grp Volume(v), veh/h	84	1049	103	28	598	98	83	0	55	76	0	79
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	1885	1598	1320	0	1654	1349	0	1632
Q Serve(g_s), s	1.4	41.3	2.3	0.5	16.4	2.3	4.8	0.0	2.3	4.2	0.0	3.5
Cycle Q Clear(g_c), s	1.4	41.3	2.3	0.5	16.4	2.3	8.3	0.0	2.3	6.5	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.81
Lane Grp Cap(c), veh/h	483	1095	928	192	1035	877	210	0	221	232	0	219
V/C Ratio(X)	0.17	0.96	0.11	0.15	0.58	0.11	0.39	0.00	0.25	0.33	0.00	0.36
Avail Cap(c_a), veh/h	508	1104	936	279	1104	936	336	0	379	366	0	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	15.6	7.4	16.9	11.7	8.5	34.7	0.0	30.5	33.4	0.0	31.0
Incr Delay (d2), s/veh	0.1	18.1	0.1	0.1	1.2	0.1	1.2	0.0	0.6	0.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	18.7	0.6	0.2	5.8	0.7	1.6	0.0	1.0	1.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	33.7	7.5	17.0	12.9	8.6	35.9	0.0	31.0	34.2	0.0	32.0
LnGrp LOS	A	C	A	B	B	A	D	A	C	C	A	C
Approach Vol, veh/h		1236			724			138			155	
Approach Delay, s/veh		29.7			12.5			34.0			33.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	51.7		17.2	12.1	49.2		17.2				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 46		* 18	7.0	* 46		18.0				
Max Q Clear Time (g_c+I1), s	2.5	43.3		8.5	3.4	18.4		10.3				
Green Ext Time (p_c), s	0.0	2.3		0.4	0.0	8.5		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		24.7
HCM 6th LOS		C

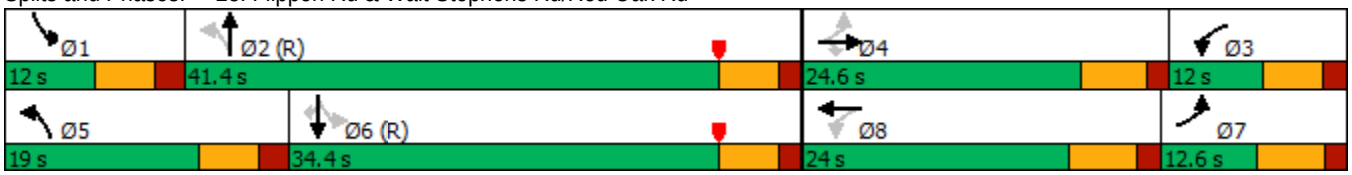
Notes

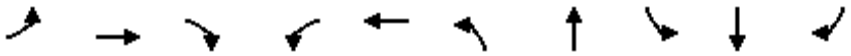
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	251	316	631	48	176	459	430	60	626	286
Future Volume (vph)	251	316	631	48	176	459	430	60	626	286
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	25.2	21.0	21.0	21.5	15.0	49.8	40.5	34.5	28.8	28.8
Actuated g/C Ratio	0.28	0.23	0.23	0.24	0.17	0.55	0.45	0.38	0.32	0.32
v/c Ratio	0.85	0.77	1.10	0.25	0.73	1.27	0.61	0.18	1.12	0.43
Control Delay	55.7	47.3	86.2	26.5	47.2	164.4	10.4	12.7	105.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	47.3	86.2	26.5	47.2	164.4	10.4	12.7	105.1	4.8
LOS	E	D	F	C	D	F	B	B	F	A
Approach Delay		69.5			43.3		86.5		69.8	
Approach LOS		E			D		F		E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 72.3	Intersection LOS: E
Intersection Capacity Utilization 103.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	270	340	678	52	229	494	505	65	673	308
v/c Ratio	0.85	0.77	1.10	0.25	0.73	1.27	0.61	0.18	1.12	0.43
Control Delay	55.7	47.3	86.2	26.5	47.2	164.4	10.4	12.7	105.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	47.3	86.2	26.5	47.2	164.4	10.4	12.7	105.1	4.8
Queue Length 50th (ft)	118	189	~306	20	117	~320	158	17	~445	0
Queue Length 95th (ft)	#196	#340	#521	45	190	m#395	m145	37	#655	56
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	319	439	617	208	373	390	831	355	601	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.77	1.10	0.25	0.61	1.27	0.61	0.18	1.12	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	316	631	48	176	37	459	430	40	60	626	286
Future Volume (veh/h)	251	316	631	48	176	37	459	430	40	60	626	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	270	340	678	52	189	40	494	462	43	65	673	308
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	284	382	323	167	226	48	337	728	68	372	643	545
Arrive On Green	0.10	0.20	0.20	0.05	0.15	0.15	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	1795	1885	1598	1795	1508	319	1781	1685	157	1795	1885	1598
Grp Volume(v), veh/h	270	340	678	52	0	229	494	0	505	65	673	308
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1828	1781	0	1842	1795	1885	1598
Q Serve(g_s), s	8.2	15.8	11.9	0.0	0.0	11.0	13.0	0.0	19.3	2.0	30.7	9.2
Cycle Q Clear(g_c), s	8.2	15.8	11.9	0.0	0.0	11.0	13.0	0.0	19.3	2.0	30.7	9.2
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	284	382	323	167	0	273	337	0	796	372	643	545
V/C Ratio(X)	0.95	0.89	2.10	0.31	0.00	0.84	1.46	0.00	0.63	0.17	1.05	0.56
Avail Cap(c_a), veh/h	284	390	330	204	0	364	337	0	796	396	643	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	1.00	0.00	1.00	0.19	0.00	0.19	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	34.9	15.2	40.7	0.0	37.2	26.5	0.0	20.0	17.8	29.6	10.2
Incr Delay (d2), s/veh	26.8	12.7	498.6	1.0	0.0	12.2	212.2	0.0	0.7	0.2	48.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	8.1	48.8	1.1	0.0	5.7	24.8	0.0	7.6	0.8	21.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	47.6	513.8	41.8	0.0	49.4	238.7	0.0	20.7	18.1	77.8	14.4
LnGrp LOS	E	D	F	D	A	D	F	A	C	B	F	B
Approach Vol, veh/h		1288			281			999			1046	
Approach Delay, s/veh		296.8			48.0			128.5			55.4	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	44.5	10.5	24.2	19.0	36.3	15.1	19.6
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	4.0	21.3	2.0	17.8	15.0	32.7	10.2	13.0
Green Ext Time (p_c), s	0.0	4.5	0.0	0.4	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	161.1
HCM 6th LOS	F

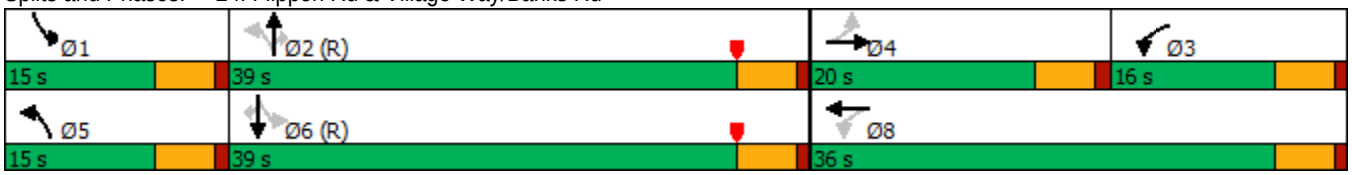
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	2	172	3	7	685	177	314	947	9
Future Volume (vph)	5	2	172	3	7	685	177	314	947	9
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	10.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	16.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	20.0	20.0	16.0	36.0	15.0	39.0	39.0	15.0	39.0	39.0
Total Split (%)	22.2%	22.2%	17.8%	40.0%	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	18.4	18.4	45.8	35.8	35.8	60.8	58.6	58.6
Actuated g/C Ratio		0.17	0.20	0.20	0.51	0.40	0.40	0.68	0.65	0.65
v/c Ratio		0.03	0.51	0.46	0.02	0.96	0.25	0.64	0.81	0.01
Control Delay		28.7	36.2	6.8	7.7	51.7	6.2	24.7	10.3	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	36.2	6.8	7.7	51.7	6.2	24.7	10.3	0.0
LOS		C	D	A	A	D	A	C	B	A
Approach Delay		28.7		19.5		42.1			13.8	
Approach LOS		C		B		D			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd

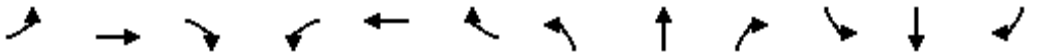




Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	179	236	7	714	184	327	986	9
v/c Ratio	0.03	0.51	0.46	0.02	0.96	0.25	0.64	0.81	0.01
Control Delay	28.7	36.2	6.8	7.7	51.7	6.2	24.7	10.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	36.2	6.8	7.7	51.7	6.2	24.7	10.3	0.0
Queue Length 50th (ft)	3	95	1	1	368	13	95	44	0
Queue Length 95th (ft)	17	127	50	8	#643	57	m#108	m#642	m0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	308	356	710	295	747	729	509	1213	1102
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.50	0.33	0.02	0.96	0.25	0.64	0.81	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	2	172	3	224	7	685	177	314	947	9
Future Volume (veh/h)	5	2	2	172	3	224	7	685	177	314	947	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1870	1900
Adj Flow Rate, veh/h	5	2	2	179	3	233	7	714	184	327	986	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	0	2	0
Cap, veh/h	62	6	2	299	4	317	284	986	843	428	1153	993
Arrive On Green	0.03	0.03	0.03	0.11	0.20	0.20	0.02	0.52	0.52	0.15	0.82	0.82
Sat Flow, veh/h	0	186	53	1810	21	1593	1810	1885	1610	1810	1870	1610
Grp Volume(v), veh/h	9	0	0	179	0	236	7	714	184	327	986	9
Grp Sat Flow(s),veh/h/ln	239	0	0	1810	0	1613	1810	1885	1610	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	3.2	0.0	12.4	0.2	26.2	3.0	7.0	28.6	0.1
Cycle Q Clear(g_c), s	3.0	0.0	0.0	3.2	0.0	12.4	0.2	26.2	3.0	7.0	28.6	0.1
Prop In Lane	0.56		0.22	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	0	0	299	0	321	284	986	843	428	1153	993
V/C Ratio(X)	0.13	0.00	0.00	0.60	0.00	0.74	0.02	0.72	0.22	0.76	0.86	0.01
Avail Cap(c_a), veh/h	252	0	0	322	0	556	453	986	843	428	1153	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	42.5	0.0	0.0	36.1	0.0	33.8	11.8	16.5	3.3	14.4	5.7	3.1
Incr Delay (d2), s/veh	1.7	0.0	0.0	3.4	0.0	6.8	0.0	4.6	0.6	0.8	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.8	0.0	5.3	0.1	10.9	1.8	2.8	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	0.0	39.5	0.0	40.6	11.9	21.1	3.9	15.2	6.5	3.1
LnGrp LOS	D	A	A	D	A	D	B	C	A	B	A	A
Approach Vol, veh/h		9			415			905			1322	
Approach Delay, s/veh		44.2			40.2			17.5			8.6	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	52.1	14.9	8.0	6.6	60.5		22.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	34.0	11.0	15.0	10.0	34.0		31.0				
Max Q Clear Time (g_c+I1), s	9.0	28.2	5.2	5.0	2.2	30.6		14.4				
Green Ext Time (p_c), s	0.2	3.8	0.3	0.0	0.0	2.7		2.2				

Intersection Summary			
HCM 6th Ctrl Delay		16.7	
HCM 6th LOS		B	

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	445	343	54	60	54
Future Vol, veh/h	48	445	343	54	60	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	478	369	58	65	58

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	427	0	-	0	980	398
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	582	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1132	-	-	-	277	652
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	559	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1132	-	-	-	260	652
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	559	-

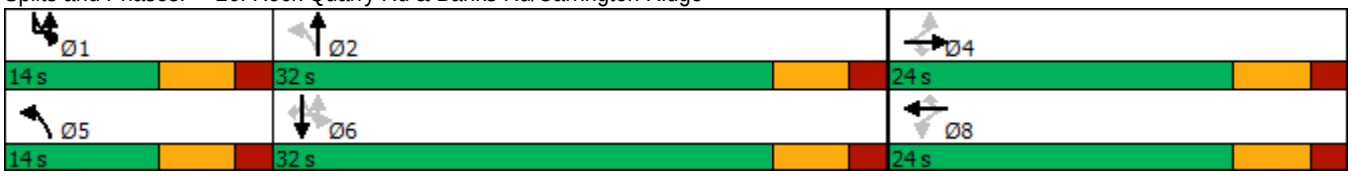
Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1132	-	-	-	364
HCM Lane V/C Ratio	0.046	-	-	-	0.337
HCM Control Delay (s)	8.3	0	-	-	19.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	25	357	24	15	8	288	728	14	788	103
Future Volume (vph)	89	25	357	24	15	8	288	728	14	788	103
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	32.0	14.0	32.0	32.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	20.0%	45.7%	20.0%	45.7%	45.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)		11.5	11.5		11.5	11.5	36.2	34.8	28.8	22.7	22.7
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.60	0.58	0.48	0.38	0.38
v/c Ratio		0.45	0.68		0.15	0.02	0.69	0.39	0.03	0.61	0.15
Control Delay		28.3	12.6		22.3	0.1	18.3	9.3	6.4	18.0	2.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.3	12.6		22.3	0.1	18.3	9.3	6.4	18.0	2.4
LOS		C	B		C	A	B	A	A	B	A
Approach Delay		16.4			18.7			11.8		16.0	
Approach LOS		B			B			B		B	

Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 60.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge

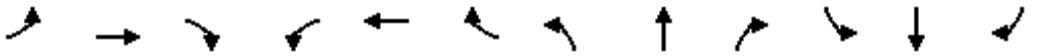




Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	119	372	41	8	300	791	15	821	107
v/c Ratio	0.45	0.68	0.15	0.02	0.69	0.39	0.03	0.61	0.15
Control Delay	28.3	12.6	22.3	0.1	18.3	9.3	6.4	18.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	12.6	22.3	0.1	18.3	9.3	6.4	18.0	2.4
Queue Length 50th (ft)	41	24	13	0	41	61	2	118	0
Queue Length 95th (ft)	85	97	36	0	#167	185	10	204	18
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	420	696	437	585	433	2025	492	1557	782
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.53	0.09	0.01	0.69	0.39	0.03	0.53	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	25	357	24	15	8	288	728	32	14	788	103
Future Volume (veh/h)	89	25	357	24	15	8	288	728	32	14	788	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	93	26	372	25	16	8	300	758	33	15	821	107
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	1	2	2	0	1	0
Cap, veh/h	98	16	442	88	37	442	407	1487	65	337	1176	529
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.43	0.43	0.02	0.33	0.33
Sat Flow, veh/h	0	59	1610	0	135	1610	1795	3469	151	1810	3582	1610
Grp Volume(v), veh/h	119	0	372	41	0	8	300	388	403	15	821	107
Grp Sat Flow(s),veh/h/ln	59	0	1610	135	0	1610	1795	1777	1843	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	14.3	0.0	0.0	0.2	6.8	10.5	10.5	0.4	13.1	3.1
Cycle Q Clear(g_c), s	18.0	0.0	14.3	18.0	0.0	0.2	6.8	10.5	10.5	0.4	13.1	3.1
Prop In Lane	0.78		1.00	0.61		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	114	0	442	126	0	442	407	761	790	337	1176	529
V/C Ratio(X)	1.04	0.00	0.84	0.33	0.00	0.02	0.74	0.51	0.51	0.04	0.70	0.20
Avail Cap(c_a), veh/h	114	0	442	126	0	442	407	761	790	518	1422	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	22.4	19.7	0.0	17.3	13.7	13.7	13.7	14.1	19.2	15.8
Incr Delay (d2), s/veh	96.2	0.0	13.6	1.5	0.0	0.0	6.5	1.2	1.1	0.0	1.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	6.8	0.5	0.0	0.1	2.8	3.6	3.8	0.1	4.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.4	0.0	36.0	21.2	0.0	17.3	20.2	14.8	14.8	14.1	21.1	16.2
LnGrp LOS	F	A	D	C	A	B	C	B	B	B	C	B
Approach Vol, veh/h		491			49			1091			943	
Approach Delay, s/veh		57.9			20.6			16.3			20.4	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	34.1		24.0	14.0	27.5		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	26.0		18.0	8.0	26.0		18.0				
Max Q Clear Time (g_c+I1), s	2.4	12.5		20.0	8.8	15.1		20.0				
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	6.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		25.8	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	148	1	111	5	0	2	70	758	4	2	784	111
Future Vol, veh/h	148	1	111	5	0	2	70	758	4	2	784	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	0	0	0	2	2	0	0	2	2
Mvmt Flow	156	1	117	5	0	2	74	798	4	2	825	117

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1376	1779	413	1363	-	399	942	0	0	802	0	0
Stage 1	829	829	-	946	-	-	-	-	-	-	-	-
Stage 2	547	950	-	417	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.5	6.94	7.5	-	6.9	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	6.54	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4	3.32	3.5	-	3.3	2.22	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 104	83	588	109	0	606	724	-	-	830	-	-
Stage 1	331	388	-	285	0	-	-	-	-	-	-	-
Stage 2	489	341	-	589	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 95	74	588	79	-	606	724	-	-	830	-	-
Mov Cap-2 Maneuver	~ 95	74	-	79	-	-	-	-	-	-	-	-
Stage 1	297	387	-	256	-	-	-	-	-	-	-	-
Stage 2	437	306	-	470	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	11	0.9	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	724	-	-	588	606	830	-	-
HCM Lane V/C Ratio	0.102	-	-	0.199	0.003	0.003	-	-
HCM Control Delay (s)	10.5	-	-	12.6	11	9.3	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.7	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	152	229	22	7	152	26	11	66	12	14	88	92
Future Vol, veh/h	152	229	22	7	152	26	11	66	12	14	88	92
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	5	0	0	1	5	0	0	0	0	0	0
Mvmt Flow	169	254	24	8	169	29	12	73	13	16	98	102
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.3	10.9	10.2	11.4
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	38%	4%	7%
Vol Thru, %	74%	57%	82%	45%
Vol Right, %	13%	5%	14%	47%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	403	185	194
LT Vol	11	152	7	14
Through Vol	66	229	152	88
RT Vol	12	22	26	92
Lane Flow Rate	99	448	206	216
Geometry Grp	1	1	1	1
Degree of Util (X)	0.165	0.646	0.309	0.332
Departure Headway (Hd)	5.992	5.195	5.417	5.543
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	596	694	662	647
Service Time	4.055	3.237	3.47	3.597
HCM Lane V/C Ratio	0.166	0.646	0.311	0.334
HCM Control Delay	10.2	17.3	10.9	11.4
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.6	4.7	1.3	1.5

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	368	55	14	248	92	40	5	22	92	11	4
Future Vol, veh/h	1	368	55	14	248	92	40	5	22	92	11	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	391	59	15	264	98	43	5	23	98	12	4
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	19.4	14.5	10.3	11.1
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	60%	100%	0%	100%	0%	86%
Vol Thru, %	7%	0%	87%	0%	73%	10%
Vol Right, %	33%	0%	13%	0%	27%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	1	423	14	340	107
LT Vol	40	1	0	14	0	92
Through Vol	5	0	368	0	248	11
RT Vol	22	0	55	0	92	4
Lane Flow Rate	71	1	450	15	362	114
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.125	0.002	0.686	0.026	0.55	0.203
Departure Headway (Hd)	6.306	6.088	5.49	6.172	5.474	6.405
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	567	588	657	580	658	559
Service Time	4.366	3.822	3.224	3.908	3.21	4.459
HCM Lane V/C Ratio	0.125	0.002	0.685	0.026	0.55	0.204
HCM Control Delay	10.3	8.8	19.4	9.1	14.7	11.1
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.4	0	5.4	0.1	3.4	0.8

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	677	11	2	969
Future Vol, veh/h	9	5	677	11	2	969
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	1	1
Mvmt Flow	10	6	752	12	2	1077

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1833	752	0	0	764	0
Stage 1	752	-	-	-	-	-
Stage 2	1081	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	84	410	-	-	853	-
Stage 1	466	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	83	410	-	-	853	-
Mov Cap-2 Maneuver	83	-	-	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	324	-	-	-	-	-

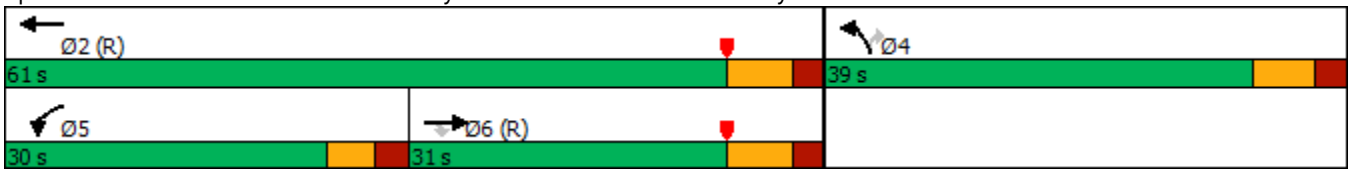
Approach	WB	NB	SB
HCM Control Delay, s	40.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	116	853	-
HCM Lane V/C Ratio	-	-	0.134	0.003	-
HCM Control Delay (s)	-	-	40.8	9.2	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	674	415	522	1142	489	369
Future Volume (vph)	674	415	522	1142	489	369
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	30.3	30.3	23.0	59.3	26.3	26.3
Actuated g/C Ratio	0.30	0.30	0.23	0.59	0.26	0.26
v/c Ratio	0.83	0.45	0.83	0.68	0.72	0.45
Control Delay	44.4	4.6	48.2	17.3	39.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	4.6	48.2	17.3	39.1	4.4
LOS	D	A	D	B	D	A
Approach Delay	29.3			27.0	24.2	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	733	451	567	1241	532	401
v/c Ratio	0.83	0.45	0.83	0.68	0.72	0.45
Control Delay	44.4	4.6	48.2	17.3	39.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	4.6	48.2	17.3	39.1	4.4
Queue Length 50th (ft)	234	0	174	267	158	0
Queue Length 95th (ft)	#389	42	#245	395	201	35
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	880	1008	724	1814	893	998
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.45	0.78	0.68	0.60	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	674	415	522	1142	489	369
Future Volume (veh/h)	674	415	522	1142	489	369
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	733	451	567	1241	532	401
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1009	792	636	1911	679	548
Arrive On Green	0.34	0.34	0.21	0.62	0.24	0.24
Sat Flow, veh/h	3011	2303	3018	3185	2826	2281
Grp Volume(v), veh/h	733	451	567	1241	532	401
Grp Sat Flow(s),veh/h/ln	1467	1152	1509	1552	1413	1141
Q Serve(g_s), s	21.8	16.0	18.3	25.6	17.6	16.2
Cycle Q Clear(g_c), s	21.8	16.0	18.3	25.6	17.6	16.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1009	792	636	1911	679	548
V/C Ratio(X)	0.73	0.57	0.89	0.65	0.78	0.73
Avail Cap(c_a), veh/h	1009	792	721	1911	901	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	26.8	38.3	12.3	35.6	35.0
Incr Delay (d2), s/veh	4.6	3.0	12.3	1.7	4.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	4.3	7.5	7.8	6.0	10.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.2	29.7	50.7	14.0	39.5	38.3
LnGrp LOS	C	C	D	B	D	D
Approach Vol, veh/h	1184			1808	933	
Approach Delay, s/veh	31.9			25.5	39.0	
Approach LOS	C			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.9		31.1	27.2	41.7
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		27.6		19.6	20.3	23.8
Green Ext Time (p_c), s		16.4		4.4	0.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

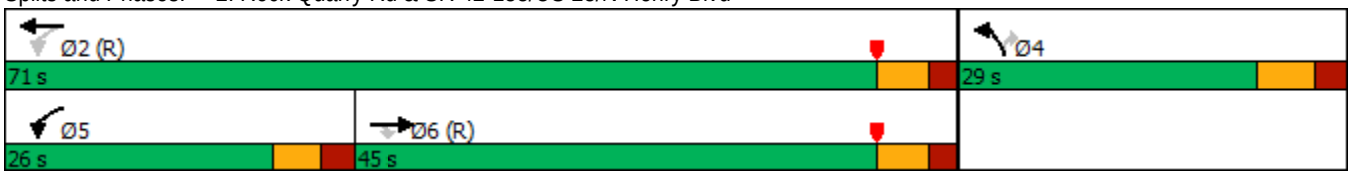
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	914	251	478	1489	196	445
Future Volume (vph)	914	251	478	1489	196	445
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	37.9	37.9	67.1	67.0	20.0	20.0
Actuated g/C Ratio	0.38	0.38	0.67	0.67	0.20	0.20
v/c Ratio	0.86	0.35	0.97	0.80	0.30	0.50
Control Delay	37.0	7.6	58.5	16.0	35.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	7.6	58.5	16.0	35.5	5.3
LOS	D	A	E	B	D	A
Approach Delay	30.7			26.3	14.5	
Approach LOS	C			C	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	962	264	503	1567	206	468
v/c Ratio	0.86	0.35	0.97	0.80	0.30	0.50
Control Delay	37.0	7.6	58.5	16.0	35.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	7.6	58.5	16.0	35.5	5.3
Queue Length 50th (ft)	313	16	242	335	58	0
Queue Length 95th (ft)	408	88	#460	441	91	44
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1141	777	518	1950	758	980
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.34	0.97	0.80	0.27	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	914	251	478	1489	196	445
Future Volume (veh/h)	914	251	478	1489	196	445
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	962	264	503	1567	206	468
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1215	650	472	1966	691	558
Arrive On Green	0.14	0.14	0.20	0.67	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	3456	2790
Grp Volume(v), veh/h	962	264	503	1567	206	468
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1728	1395
Q Serve(g_s), s	31.5	15.2	20.0	37.8	5.1	16.1
Cycle Q Clear(g_c), s	31.5	15.2	20.0	37.8	5.1	16.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1215	650	472	1966	691	558
V/C Ratio(X)	0.79	0.41	1.07	0.80	0.30	0.84
Avail Cap(c_a), veh/h	1215	650	472	1966	764	617
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	32.1	28.1	11.7	34.0	38.5
Incr Delay (d2), s/veh	4.8	1.7	60.3	3.5	0.3	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	6.7	12.8	10.4	2.1	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.9	33.8	88.3	15.2	34.4	48.3
LnGrp LOS	D	C	F	B	C	D
Approach Vol, veh/h	1226			2070	674	
Approach Delay, s/veh	41.8			32.9	44.0	
Approach LOS	D			C	D	

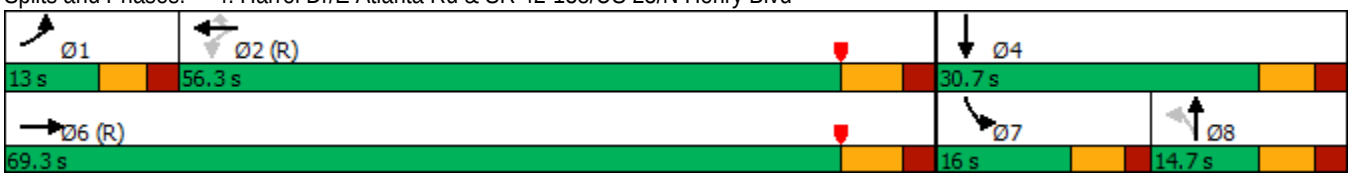
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.1		26.9	26.0	47.1
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s		39.8		18.1	22.0	33.5
Green Ext Time (p_c), s		21.6		1.5	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	216	843	21	1466	233	80	37	314	7
Future Volume (vph)	216	843	21	1466	233	80	37	314	7
Turn Type	Prot	NA	Perm	NA	Perm	Perm	NA	Prot	NA
Protected Phases	1	6		2			8	7	4
Permitted Phases			2		2	8			
Detector Phase	1	6	2	2	2	8	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	5.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	11.0	14.7
Total Split (s)	13.0	69.3	56.3	56.3	56.3	14.7	14.7	16.0	30.7
Total Split (%)	13.0%	69.3%	56.3%	56.3%	56.3%	14.7%	14.7%	16.0%	30.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.0	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1	6.7	6.7	6.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	7.0	62.2	49.2	49.2	49.2	8.0	8.0	10.0	24.0
Actuated g/C Ratio	0.07	0.62	0.49	0.49	0.49	0.08	0.08	0.10	0.24
v/c Ratio	1.08	0.52	0.08	1.06	0.30	0.86	0.54	1.09	0.37
Control Delay	136.0	3.8	15.8	72.2	7.0	106.0	30.1	122.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.0	3.8	15.8	72.2	7.0	106.0	30.1	122.6	9.5
LOS	F	A	B	E	A	F	C	F	A
Approach Delay		28.7		62.7			63.3		84.4
Approach LOS		C		E			E		F

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 54.6	Intersection LOS: D
Intersection Capacity Utilization 85.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	225	970	22	1527	243	83	107	327	167
v/c Ratio	1.08	0.52	0.08	1.06	0.30	0.86	0.54	1.09	0.37
Control Delay	136.0	3.8	15.8	72.2	7.0	106.0	30.1	122.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.0	3.8	15.8	72.2	7.0	106.0	30.1	122.6	9.5
Queue Length 50th (ft)	~85	35	11	~559	36	53	24	~122	8
Queue Length 95th (ft)	m#146	57	m10	#703	54	#143	78	#209	62
Internal Link Dist (ft)		3939		643			194		367
Turn Bay Length (ft)	150		100						
Base Capacity (vph)	209	1851	270	1444	798	97	197	299	449
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.52	0.08	1.06	0.30	0.86	0.54	1.09	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	843	88	21	1466	233	80	37	65	314	7	154
Future Volume (veh/h)	216	843	88	21	1466	233	80	37	65	314	7	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1648	1870	1870	1870	1648	1870	1870
Adj Flow Rate, veh/h	225	878	92	22	1527	243	83	39	68	327	7	160
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	17	2	2	2	17	2	2
Cap, veh/h	213	1699	178	329	1457	687	169	49	85	304	16	367
Arrive On Green	0.07	0.62	0.62	0.49	0.49	0.49	0.08	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	3045	2731	286	579	2962	1397	1218	612	1067	3045	67	1528
Grp Volume(v), veh/h	225	481	489	22	1527	243	83	0	107	327	0	167
Grp Sat Flow(s),veh/h/ln	1522	1495	1522	579	1481	1397	1218	0	1678	1522	0	1595
Q Serve(g_s), s	7.0	17.9	17.9	2.2	49.2	10.7	6.7	0.0	6.3	10.0	0.0	8.9
Cycle Q Clear(g_c), s	7.0	17.9	17.9	7.1	49.2	10.7	6.7	0.0	6.3	10.0	0.0	8.9
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.64	1.00		0.96
Lane Grp Cap(c), veh/h	213	930	947	329	1457	687	169	0	134	304	0	383
V/C Ratio(X)	1.06	0.52	0.52	0.07	1.05	0.35	0.49	0.00	0.80	1.07	0.00	0.44
Avail Cap(c_a), veh/h	213	930	947	329	1457	687	169	0	134	304	0	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.5	10.5	10.5	16.1	25.4	15.6	45.4	0.0	45.2	45.0	0.0	32.3
Incr Delay (d2), s/veh	65.8	1.4	1.4	0.3	34.0	1.0	2.2	0.0	27.5	72.6	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	5.6	5.7	0.3	22.6	3.4	2.1	0.0	3.6	6.8	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.3	11.9	11.9	16.4	59.4	16.7	47.6	0.0	72.7	117.6	0.0	33.0
LnGrp LOS	F	B	B	B	F	B	D	A	E	F	A	C
Approach Vol, veh/h		1195			1792			190			494	
Approach Delay, s/veh		30.8			53.1			61.8			89.0	
Approach LOS		C			D			E			F	

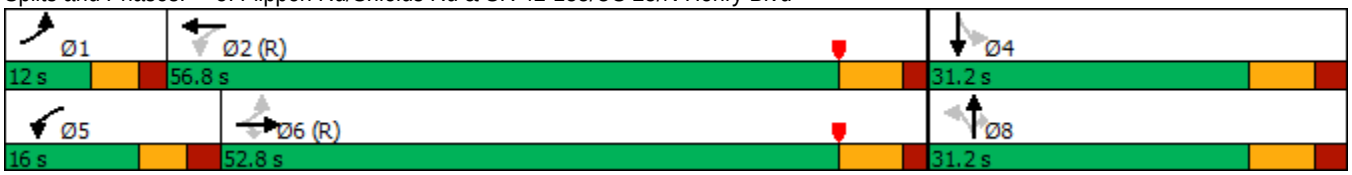
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	13.0	56.3		30.7		69.3	16.0	14.7				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1	6.0	6.7				
Max Green Setting (Gmax), s	7.0	49.2		24.0		62.2	10.0	8.0				
Max Q Clear Time (g_c+I1), s	9.0	51.2		10.9		19.9	12.0	8.7				
Green Ext Time (p_c), s	0.0	0.0		0.7		16.0	0.0	0.0				

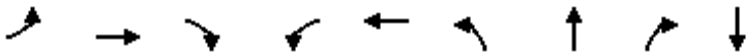
Intersection Summary		
HCM 6th Ctrl Delay		51.1
HCM 6th LOS		D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	964	124	211	1700	259	18	216	30	52
Future Volume (vph)	5	964	124	211	1700	259	18	216	30	52
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6	2		8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	54.5	47.4	47.4	63.3	60.6	23.0	23.0	23.0		23.0
Actuated g/C Ratio	0.54	0.47	0.47	0.63	0.61	0.23	0.23	0.23		0.23
v/c Ratio	0.03	0.74	0.19	0.67	1.00	0.88	0.04	0.45		0.28
Control Delay	7.6	25.8	3.6	15.5	43.5	65.9	29.8	11.2		30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	7.6	25.8	3.6	15.5	43.5	65.9	29.8	11.2		30.0
LOS	A	C	A	B	D	E	C	B		C
Approach Delay		23.2			40.4		40.6			30.0
Approach LOS		C			D		D			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 34.9	Intersection LOS: C
Intersection Capacity Utilization 89.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd



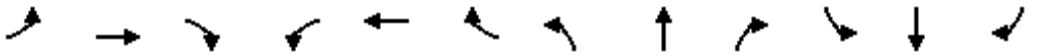


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	5	1015	131	222	1797	273	19	227	110
v/c Ratio	0.03	0.74	0.19	0.67	1.00	0.88	0.04	0.45	0.28
Control Delay	7.6	25.8	3.6	15.5	43.5	65.9	29.8	11.2	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	25.8	3.6	15.5	43.5	65.9	29.8	11.2	30.0
Queue Length 50th (ft)	1	274	0	69	643	167	9	22	51
Queue Length 95th (ft)	5	357	32	m74	m#744	#308	28	86	99
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	188	1370	681	338	1792	322	443	516	400
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.74	0.19	0.66	1.00	0.85	0.04	0.44	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	964	124	211	1700	8	259	18	216	30	52	22
Future Volume (veh/h)	5	964	124	211	1700	8	259	18	216	30	52	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1015	131	222	1789	8	273	19	227	32	55	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	86	1435	640	320	1741	8	374	421	357	125	203	75
Arrive On Green	0.01	0.49	0.49	0.08	0.57	0.57	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	2906	1296	1753	3053	14	1321	1870	1585	350	903	331
Grp Volume(v), veh/h	5	1015	131	222	876	921	273	19	227	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1296	1753	1495	1572	1321	1870	1585	1584	0	0
Q Serve(g_s), s	0.1	27.2	5.7	5.9	57.0	57.0	14.6	0.8	13.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.1	27.2	5.7	5.9	57.0	57.0	19.7	0.8	13.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.29		0.21
Lane Grp Cap(c), veh/h	86	1435	640	320	853	896	374	421	357	403	0	0
V/C Ratio(X)	0.06	0.71	0.20	0.69	1.03	1.03	0.73	0.05	0.64	0.27	0.00	0.00
Avail Cap(c_a), veh/h	186	1435	640	355	853	896	391	445	377	423	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	19.7	14.2	17.3	21.5	21.5	37.5	30.3	35.0	32.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	3.0	0.7	0.5	17.3	17.5	8.2	0.1	4.9	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.8	1.7	2.1	21.6	22.7	7.2	0.4	5.4	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	22.6	15.0	17.7	38.8	39.0	45.8	30.4	39.9	32.8	0.0	0.0
LnGrp LOS	C	C	B	B	F	F	D	C	D	C	A	A
Approach Vol, veh/h		1151			2019			519			110	
Approach Delay, s/veh		21.8			36.6			42.7			32.8	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	63.7		29.9	14.0	56.1		29.9				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	59.0		7.1	7.9	29.2		21.7				
Green Ext Time (p_c), s	0.0	0.0		0.8	0.1	10.8		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		32.8	
HCM 6th LOS		C	

Intersection	
Int Delay, s/veh	19.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	3	86	12	3	16	111	1759	25	9	851	33
Future Vol, veh/h	34	3	86	12	3	16	111	1759	25	9	851	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	36	3	91	13	3	17	117	1852	26	9	896	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2076	3026	448	2554	3035	926	931	0	0	1878	0	0
Stage 1	914	914	-	2086	2086	-	-	-	-	-	-	-
Stage 2	1162	2112	-	468	949	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 31	13	558	13	13	271	731	-	-	316	-	-
Stage 1	294	350	-	54	93	-	-	-	-	-	-	-
Stage 2	207	90	-	545	337	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 20	11	558	~ 7	11	271	731	-	-	316	-	-
Mov Cap-2 Maneuver	~ 20	11	-	~ 7	11	-	-	-	-	-	-	-
Stage 1	247	340	-	45	78	-	-	-	-	-	-	-
Stage 2	156	76	-	439	328	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	282.9	$ 659.8	0.6	0.2
HCM LOS	F	F		

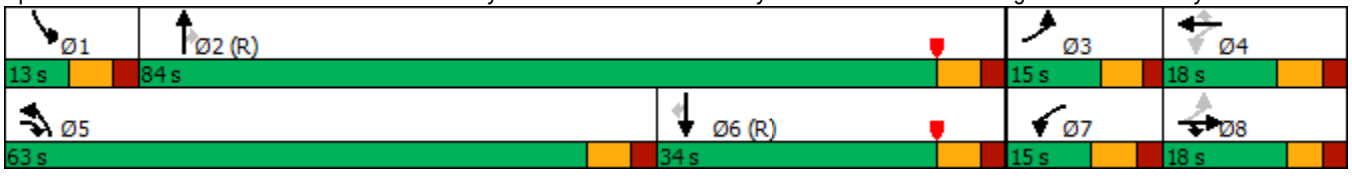
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	731	-	-	19	558	8	271	316	-	-
HCM Lane V/C Ratio	0.16	-	-	2.05	0.162	1.974	0.062	0.03	-	-
HCM Control Delay (s)	10.9	-	-	$ 910.9	12.3	$ 1343.2	19.2	16.7	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	0.6	-	-	5.3	0.6	3	0.2	0.1	-	-

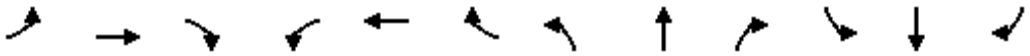
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	78	535	41	62	51	1013	699	45	25	323	214
Future Volume (vph)	119	78	535	41	62	51	1013	699	45	25	323	214
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	15.0	18.0		15.0	18.0	18.0	63.0	84.0	84.0	13.0	34.0	34.0
Total Split (%)	11.5%	13.8%		11.5%	13.8%	13.8%	48.5%	64.6%	64.6%	10.0%	26.2%	26.2%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	28.1	17.9	77.5	19.7	12.4	12.4	52.9	78.6	78.6	6.8	26.7	26.7
Actuated g/C Ratio	0.22	0.14	0.60	0.15	0.10	0.10	0.41	0.60	0.60	0.05	0.21	0.21
v/c Ratio	0.49	0.17	0.38	0.19	0.37	0.16	0.87	0.42	0.05	0.28	0.39	0.48
Control Delay	31.7	34.9	19.6	41.1	61.5	1.0	43.8	15.8	0.1	67.9	47.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	34.9	19.6	41.1	61.5	1.0	43.8	15.8	0.1	67.9	47.7	9.7
LOS	C	C	B	D	E	A	D	B	A	E	D	A
Approach Delay		23.2			36.2			31.5			34.1	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

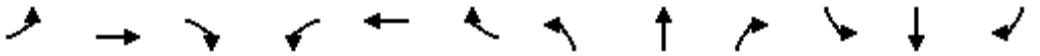
Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	124	81	557	43	65	53	1055	728	47	26	336	223
v/c Ratio	0.49	0.17	0.38	0.19	0.37	0.16	0.87	0.42	0.05	0.28	0.39	0.48
Control Delay	31.7	34.9	19.6	41.1	61.5	1.0	43.8	15.8	0.1	67.9	47.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	34.9	19.6	41.1	61.5	1.0	43.8	15.8	0.1	67.9	47.7	9.7
Queue Length 50th (ft)	85	32	181	28	51	0	402	195	0	22	96	1
Queue Length 95th (ft)	107	55	313	63	102	0	487	222	0	54	126	73
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	251	486	1510	229	186	343	1293	1815	1050	92	993	494
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.17	0.37	0.19	0.35	0.15	0.82	0.40	0.04	0.28	0.34	0.45

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	78	535	41	62	51	1013	699	45	25	323	214
Future Volume (veh/h)	119	78	535	41	62	51	1013	699	45	25	323	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	124	81	557	43	65	53	1055	728	47	26	336	223
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	216	328	1155	198	148	126	1150	1794	978	50	1143	375
Arrive On Green	0.07	0.09	0.09	0.05	0.08	0.08	0.38	0.62	0.62	0.03	0.27	0.27
Sat Flow, veh/h	1570	3554	2458	1781	1870	1585	3045	2906	1585	1781	4256	1397
Grp Volume(v), veh/h	124	81	557	43	65	53	1055	728	47	26	336	223
Grp Sat Flow(s),veh/h/ln	1570	1777	1229	1781	1870	1585	1522	1453	1585	1781	1419	1397
Q Serve(g_s), s	9.0	2.8	12.0	2.8	4.3	4.1	42.9	16.6	1.5	1.9	8.2	18.1
Cycle Q Clear(g_c), s	9.0	2.8	12.0	2.8	4.3	4.1	42.9	16.6	1.5	1.9	8.2	18.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	328	1155	198	148	126	1150	1794	978	50	1143	375
V/C Ratio(X)	0.57	0.25	0.48	0.22	0.44	0.42	0.92	0.41	0.05	0.52	0.29	0.59
Avail Cap(c_a), veh/h	216	328	1155	221	158	134	1316	1794	978	84	1143	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	54.8	23.6	50.7	57.1	57.0	38.5	12.7	9.8	62.3	37.8	41.4
Incr Delay (d2), s/veh	3.5	0.4	0.4	0.7	2.4	2.7	9.7	0.7	0.1	21.1	0.7	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	1.2	5.7	1.3	2.2	1.7	16.8	5.1	0.5	1.1	2.8	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	55.2	24.0	51.3	59.5	59.7	48.3	13.4	9.9	83.4	38.4	48.2
LnGrp LOS	D	E	C	D	E	E	D	B	A	F	D	D
Approach Vol, veh/h		762			161			1830			585	
Approach Delay, s/veh		32.3			57.4			33.4			44.1	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	87.1	15.0	17.3	55.9	41.8	13.3	19.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	6.1	77.1	9.0	11.0	56.2	27.1	8.0	* 12
Max Q Clear Time (g_c+I1), s	3.9	18.6	11.0	6.3	44.9	20.1	4.8	14.0
Green Ext Time (p_c), s	0.0	12.2	0.0	0.2	4.2	2.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

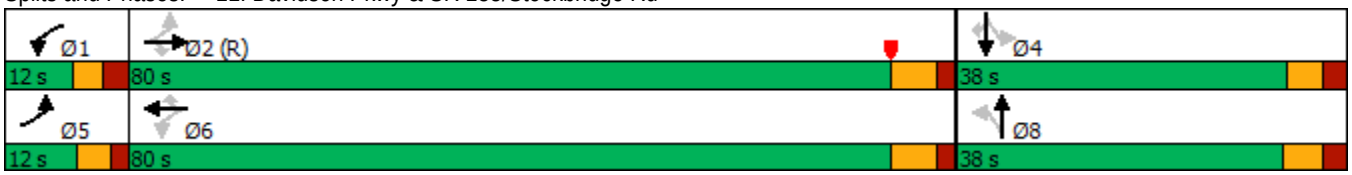
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	938	240	16	1457	53	305	11	20	12	95
Future Volume (vph)	76	938	240	16	1457	53	305	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	80.0	80.0	12.0	80.0	80.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	9.2%	61.5%	61.5%	9.2%	61.5%	61.5%	29.2%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	85.6	81.5	81.5	81.4	74.5	74.5	31.2	31.2	31.5	31.5	31.5
Actuated g/C Ratio	0.66	0.63	0.63	0.63	0.57	0.57	0.24	0.24	0.24	0.24	0.24
v/c Ratio	0.45	0.38	0.23	0.05	0.93	0.06	0.96	0.07	0.06	0.03	0.22
Control Delay	20.1	20.3	5.6	4.0	28.3	0.6	89.1	22.1	38.4	37.6	8.4
Queue Delay	0.0	0.0	0.0	0.0	28.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	20.3	5.6	4.0	56.4	0.6	89.1	22.1	38.4	37.6	8.4
LOS	C	C	A	A	E	A	F	C	D	D	A
Approach Delay		17.5			53.9			83.5		15.9	
Approach LOS		B			D			F		B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	80	987	253	17	1534	56	321	29	21	13	100
v/c Ratio	0.45	0.38	0.23	0.05	0.93	0.06	0.96	0.07	0.06	0.03	0.22
Control Delay	20.1	20.3	5.6	4.0	28.3	0.6	89.1	22.1	38.4	37.6	8.4
Queue Delay	0.0	0.0	0.0	0.0	28.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	20.3	5.6	4.0	56.4	0.6	89.1	22.1	38.4	37.6	8.4
Queue Length 50th (ft)	26	212	24	1	712	2	267	8	14	8	0
Queue Length 95th (ft)	56	298	123	m4	#790	m2	#452	34	37	26	45
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	181	2581	1087	376	1641	938	340	427	338	458	465
Starvation Cap Reductn	0	0	0	0	52	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	193	0	0	0	0	0	6
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.38	0.23	0.05	1.06	0.06	0.94	0.07	0.06	0.03	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	938	240	16	1457	53	305	11	16	20	12	95
Future Volume (veh/h)	76	938	240	16	1457	53	305	11	16	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	987	0	17	1534	56	321	12	17	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	318	2463		422	1661	915	361	171	242	374	456	387
Arrive On Green	0.09	1.00	0.00	0.04	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	4135	1585	1781	2878	1585	1280	700	992	1381	1870	1585
Grp Volume(v), veh/h	80	987	0	17	1534	56	321	0	29	21	13	100
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1781	1439	1585	1280	0	1692	1381	1870	1585
Q Serve(g_s), s	2.3	0.0	0.0	0.5	0.0	0.0	31.0	0.0	1.7	1.5	0.7	6.6
Cycle Q Clear(g_c), s	2.3	0.0	0.0	0.5	0.0	0.0	31.7	0.0	1.7	3.3	0.7	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	318	2463		422	1661	915	361	0	413	374	456	387
V/C Ratio(X)	0.25	0.40		0.04	0.92	0.06	0.89	0.00	0.07	0.06	0.03	0.26
Avail Cap(c_a), veh/h	336	2463		474	1661	915	361	0	413	377	460	390
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.00	0.66	0.66	0.66	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	0.0	0.0	10.4	0.0	0.0	50.3	0.0	37.8	39.1	37.4	39.7
Incr Delay (d2), s/veh	0.4	0.5	0.0	0.0	6.6	0.0	22.9	0.0	0.1	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	0.0	0.2	1.5	0.0	12.9	0.0	0.7	0.5	0.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	0.5	0.0	10.4	6.6	0.0	73.1	0.0	37.9	39.1	37.5	40.0
LnGrp LOS	A	A		B	A	A	E	A	D	D	D	D
Approach Vol, veh/h		1067	A		1607			350			134	
Approach Delay, s/veh		1.2			6.5			70.2			39.6	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	83.7		38.0	10.7	81.3		38.0				
Change Period (Y+Rc), s	5.5	* 6.3		* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 74		* 32	7.0	* 74		* 32				
Max Q Clear Time (g_c+I1), s	2.5	2.0		8.6	4.3	2.0		33.7				
Green Ext Time (p_c), s	0.0	18.2		0.4	0.0	40.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		13.1
HCM 6th LOS		B

Notes

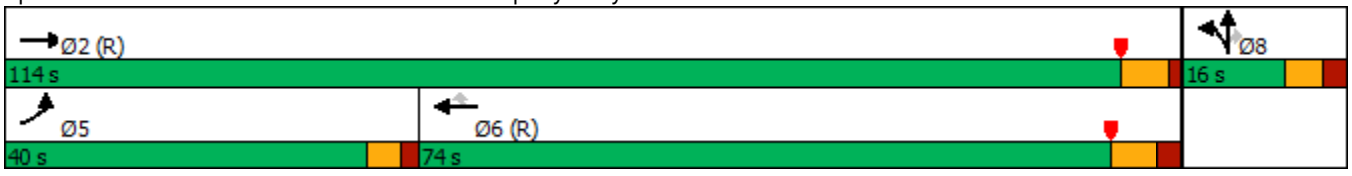
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	622	1106	1502	409	0	162
Future Volume (vph)	622	1106	1502	409	0	162
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	30.3	108.9	72.6	72.6	9.0	9.0
Actuated g/C Ratio	0.23	0.84	0.56	0.56	0.07	0.07
v/c Ratio	0.85	0.35	1.02	0.44	0.43	0.49
Control Delay	43.1	4.4	40.6	2.5	68.8	13.1
Queue Delay	0.0	0.0	26.9	0.7	0.9	0.0
Total Delay	43.1	4.4	67.5	3.2	69.7	13.1
LOS	D	A	E	A	E	B
Approach Delay		18.3	53.8		26.0	
Approach LOS		B	D		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 36.3	Intersection LOS: D
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





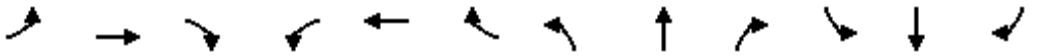
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	676	1202	1633	445	52	176
v/c Ratio	0.85	0.35	1.02	0.44	0.43	0.49
Control Delay	43.1	4.4	40.6	2.5	68.8	13.1
Queue Delay	0.0	0.0	26.9	0.7	0.9	0.0
Total Delay	43.1	4.4	67.5	3.2	69.7	13.1
Queue Length 50th (ft)	285	84	~768	13	43	0
Queue Length 95th (ft)	356	154	m#924	m25	87	39
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	924	3448	1600	1003	134	374
Starvation Cap Reductn	0	0	103	261	0	0
Spillback Cap Reductn	0	0	41	0	14	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.35	1.09	0.60	0.43	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	622	1106	0	0	1502	409	48	0	162	0	0	0
Future Volume (veh/h)	622	1106	0	0	1502	409	48	0	162	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	676	1202	0	0	1633	445	52	0	176			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	737	3403	0	0	1644	905	136	0	212			
Arrive On Green	0.43	1.00	0.00	0.00	0.57	0.57	0.08	0.00	0.08			
Sat Flow, veh/h	3456	4271	0	0	2954	1585	1781	0	2790			
Grp Volume(v), veh/h	676	1202	0	0	1633	445	52	0	176			
Grp Sat Flow(s),veh/h/ln	1728	1378	0	0	1439	1585	1781	0	1395			
Q Serve(g_s), s	23.9	0.0	0.0	0.0	73.1	21.8	3.6	0.0	8.1			
Cycle Q Clear(g_c), s	23.9	0.0	0.0	0.0	73.1	21.8	3.6	0.0	8.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	737	3403	0	0	1644	905	136	0	212			
V/C Ratio(X)	0.92	0.35	0.00	0.00	0.99	0.49	0.38	0.00	0.83			
Avail Cap(c_a), veh/h	930	3435	0	0	1644	905	136	0	212			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.59	0.59	0.00	0.00	0.31	0.31	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.2	0.0	0.0	0.0	27.6	16.6	57.1	0.0	59.2			
Incr Delay (d2), s/veh	7.5	0.2	0.0	0.0	10.9	0.6	1.8	0.0	23.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.3	0.1	0.0	0.0	25.0	7.5	1.6	0.0	3.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	0.2	0.0	0.0	38.5	17.2	58.9	0.0	82.2			
LnGrp LOS	D	A	A	A	D	B	E	A	F			
Approach Vol, veh/h		1878			2078			228				
Approach Delay, s/veh		15.8			34.0			76.9				
Approach LOS		B			C			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			32.7	81.3		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			25.9	75.1		10.1				
Green Ext Time (p_c), s		26.7			1.8	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

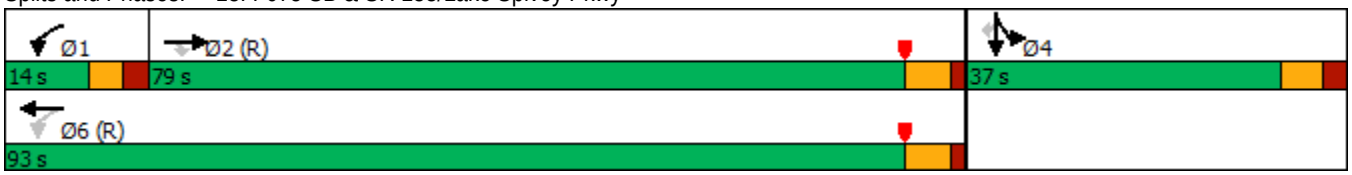
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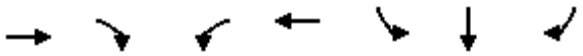
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1527	84	152	1406	218	0	604
Future Volume (vph)	1527	84	152	1406	218	0	604
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	68.4	68.4	82.8	82.8	34.8	34.8	34.8
Actuated g/C Ratio	0.53	0.53	0.64	0.64	0.27	0.27	0.27
v/c Ratio	0.77	0.10	0.85	0.85	0.27	0.27	0.89
Control Delay	17.3	2.8	45.0	9.4	40.9	40.9	61.5
Queue Delay	0.1	0.0	0.0	11.4	0.0	0.0	0.0
Total Delay	17.4	2.8	45.0	20.8	40.9	40.9	61.5
LOS	B	A	D	C	D	D	E
Approach Delay	16.6			23.1		56.1	
Approach LOS	B			C		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy



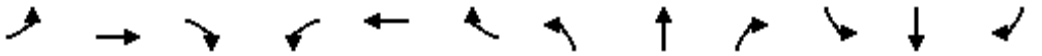


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1678	92	167	1545	120	120	664
v/c Ratio	0.77	0.10	0.85	0.85	0.27	0.27	0.89
Control Delay	17.3	2.8	45.0	9.4	40.9	40.9	61.5
Queue Delay	0.1	0.0	0.0	11.4	0.0	0.0	0.0
Total Delay	17.4	2.8	45.0	20.8	40.9	40.9	61.5
Queue Length 50th (ft)	251	4	58	614	85	85	309
Queue Length 95th (ft)	264	m12	m64	m3	149	149	#468
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2315	930	196	1919	449	449	745
Starvation Cap Reductn	60	0	0	206	0	0	0
Spillback Cap Reductn	0	0	0	374	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.10	0.85	1.00	0.27	0.27	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1527	84	152	1406	0	0	0	0	218	0	604
Future Volume (veh/h)	0	1527	84	152	1406	0	0	0	0	218	0	604
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1870	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1678	92	167	1545	0				240	0	664
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	2	2	26	0				2	2	2
Cap, veh/h	0	2401	920	303	1950	0				809	0	720
Arrive On Green	0.00	1.00	1.00	0.03	0.45	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	4271	1585	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1678	92	167	1545	0				240	0	664
Grp Sat Flow(s),veh/h/ln	0	1378	1585	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	4.7	59.5	0.0				7.3	0.0	26.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.7	59.5	0.0				7.3	0.0	26.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2401	920	303	1950	0				809	0	720
V/C Ratio(X)	0.00	0.70	0.10	0.55	0.79	0.00				0.30	0.00	0.92
Avail Cap(c_a), veh/h	0	2401	920	323	1950	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.68	0.68	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	9.1	27.7	0.0				41.6	0.0	49.1
Incr Delay (d2), s/veh	0.0	1.2	0.1	0.1	0.3	0.0				0.2	0.0	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	1.7	21.0	0.0				3.2	0.0	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.2	0.1	9.2	28.0	0.0				41.9	0.0	65.9
LnGrp LOS	A	A	A	A	C	A				D	A	E
Approach Vol, veh/h		1770			1712						904	
Approach Delay, s/veh		1.1			26.2						59.5	
Approach LOS		A			C						E	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.6	81.4		36.0		94.0						
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9						
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1						
Max Q Clear Time (g_c+I1), s	6.7	2.0		28.6		61.5						
Green Ext Time (p_c), s	0.0	43.8		0.9		19.8						

Intersection Summary												
HCM 6th Ctrl Delay			22.9									
HCM 6th LOS			C									

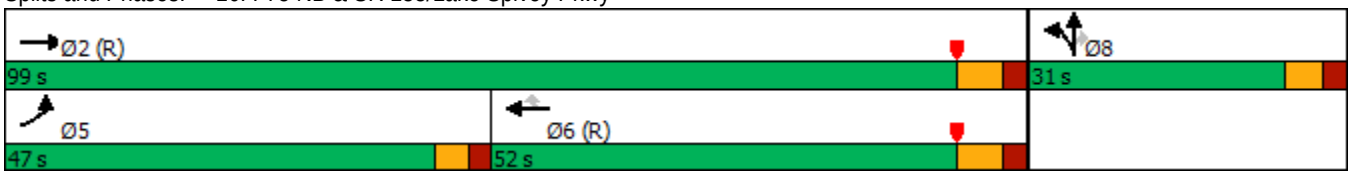
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	766	1345	1179	857	342	0	243
Future Volume (vph)	766	1345	1179	857	342	0	243
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	37.0	97.2	54.8	54.8	19.8	19.8	19.8
Actuated g/C Ratio	0.28	0.75	0.42	0.42	0.15	0.15	0.15
v/c Ratio	0.86	0.62	0.96	0.61	0.74	0.74	0.87
Control Delay	37.8	16.8	40.8	8.9	69.2	69.2	63.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	16.8	40.8	8.9	69.2	69.2	63.9
LOS	D	B	D	A	E	E	E
Approach Delay		24.5	27.4			67.0	
Approach LOS		C	C			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy



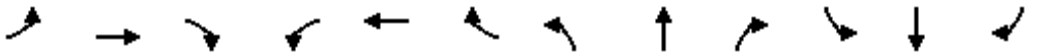


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	842	1478	1296	942	188	188	267
v/c Ratio	0.86	0.62	0.96	0.61	0.74	0.74	0.87
Control Delay	37.8	16.8	40.8	8.9	69.2	69.2	63.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	16.8	40.8	8.9	69.2	69.2	63.9
Queue Length 50th (ft)	325	516	475	83	160	160	158
Queue Length 95th (ft)	m341	m581	m#681	m84	238	238	254
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	1095	2389	1346	1547	321	321	367
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.62	0.96	0.61	0.59	0.59	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	766	1345	0	0	1179	857	342	0	243	0	0	0
Future Volume (veh/h)	766	1345	0	0	1179	857	342	0	243	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	842	1478	0	0	1296	942	376	0	267			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	936	2327	0	0	1311	1127	651	0	290			
Arrive On Green	0.18	0.48	0.00	0.00	0.81	0.81	0.18	0.00	0.18			
Sat Flow, veh/h	3456	3329	0	0	3329	2790	3563	0	1585			
Grp Volume(v), veh/h	842	1478	0	0	1296	942	376	0	267			
Grp Sat Flow(s),veh/h/ln	1728	1622	0	0	1622	1395	1781	0	1585			
Q Serve(g_s), s	31.0	44.3	0.0	0.0	49.6	26.0	12.5	0.0	21.5			
Cycle Q Clear(g_c), s	31.0	44.3	0.0	0.0	49.6	26.0	12.5	0.0	21.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	936	2327	0	0	1311	1127	651	0	290			
V/C Ratio(X)	0.90	0.64	0.00	0.00	0.99	0.84	0.58	0.00	0.92			
Avail Cap(c_a), veh/h	1103	2327	0	0	1311	1127	682	0	304			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.21	0.21	0.00	0.00	0.12	0.12	1.00	0.00	1.00			
Uniform Delay (d), s/veh	51.5	21.1	0.0	0.0	12.2	9.9	48.5	0.0	52.2			
Incr Delay (d2), s/veh	2.2	0.3	0.0	0.0	6.4	1.0	0.7	0.0	30.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	13.9	17.5	0.0	0.0	5.5	3.2	5.4	0.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	21.3	0.0	0.0	18.6	10.9	49.2	0.0	82.7			
LnGrp LOS	D	C	A	A	B	B	D	A	F			
Approach Vol, veh/h		2320			2238			643				
Approach Delay, s/veh		33.1			15.4			63.1				
Approach LOS		C			B			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		100.1			40.7	59.4		29.9				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		46.3			33.0	51.6		23.5				
Green Ext Time (p_c), s		28.7			2.2	0.0		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

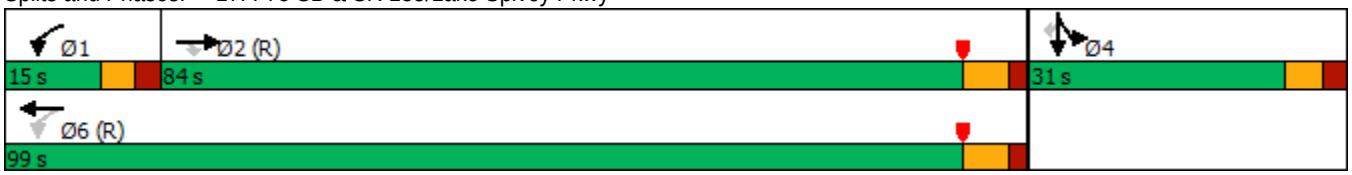
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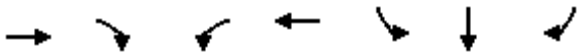
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1689	364	132	1334	441	0	299
Future Volume (vph)	1689	364	132	1334	441	0	299
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	78.9	78.9	94.1	93.6	23.9	23.9	23.9
Actuated g/C Ratio	0.61	0.61	0.72	0.72	0.18	0.18	0.18
v/c Ratio	0.97	0.36	0.82	0.64	0.80	0.80	0.94
Control Delay	30.0	2.2	59.5	6.1	69.8	69.8	75.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	2.2	59.5	6.1	69.8	69.8	75.6
LOS	C	A	E	A	E	E	E
Approach Delay	25.1			10.9		72.1	
Approach LOS	C			B		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy



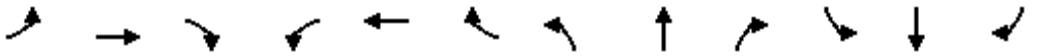


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1877	404	147	1482	245	245	332
v/c Ratio	0.97	0.36	0.82	0.64	0.80	0.80	0.94
Control Delay	30.0	2.2	59.5	6.1	69.8	69.8	75.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	2.2	59.5	6.1	69.8	69.8	75.6
Queue Length 50th (ft)	820	20	56	262	208	208	219
Queue Length 95th (ft)	#968	m36	m88	m0	#334	#334	#400
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1939	1119	183	2301	320	320	363
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.36	0.80	0.64	0.77	0.77	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1689	364	132	1334	0	0	0	0	441	0	299
Future Volume (veh/h)	0	1689	364	132	1334	0	0	0	0	441	0	299
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1877	404	147	1482	0				490	0	332
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2019	987	239	2313	0				680	0	302
Arrive On Green	0.00	1.00	1.00	0.05	0.71	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1877	404	147	1482	0				490	0	332
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.7	31.4	0.0				16.8	0.0	24.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.7	31.4	0.0				16.8	0.0	24.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2019	987	239	2313	0				680	0	302
V/C Ratio(X)	0.00	0.93	0.41	0.62	0.64	0.00				0.72	0.00	1.10
Avail Cap(c_a), veh/h	0	2019	987	283	2313	0				680	0	302
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.45	0.45	0.24	0.24	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.2	9.9	0.0				49.4	0.0	52.6
Incr Delay (d2), s/veh	0.0	4.6	0.6	0.7	0.3	0.0				3.7	0.0	80.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	0.2	1.3	9.4	0.0				7.5	0.0	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.6	0.6	7.9	10.2	0.0				53.1	0.0	133.2
LnGrp LOS	A	A	A	A	B	A				D	A	F
Approach Vol, veh/h		2281			1629						822	
Approach Delay, s/veh		3.9			10.0						85.4	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.8	87.2		31.0		99.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.7	2.0		26.8		33.4
Green Ext Time (p_c), s	0.1	61.3		0.0		33.6

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

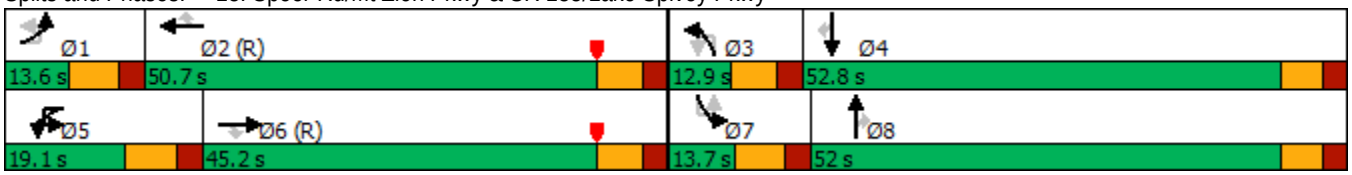
User approved volume balancing among the lanes for turning movement.

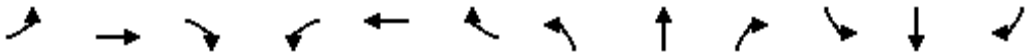
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	993	82	276	1074	155	78	216	791	161	92	74
Future Volume (vph)	89	993	82	276	1074	155	78	216	791	161	92	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	7.4	39.8	39.8	15.0	47.4	47.4	6.1	39.0	39.0	7.6	41.1	41.1
Actuated g/C Ratio	0.06	0.31	0.31	0.12	0.36	0.36	0.05	0.30	0.30	0.06	0.32	0.32
v/c Ratio	0.51	0.80	0.15	0.77	0.71	0.25	0.54	0.22	0.86	0.88	0.09	0.13
Control Delay	64.5	40.5	4.0	81.2	28.3	4.0	73.4	33.6	39.8	99.3	30.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	40.5	4.0	81.2	28.3	4.0	73.4	33.6	39.8	99.3	30.4	0.5
LOS	E	D	A	F	C	A	E	C	D	F	C	A
Approach Delay		39.8			35.5			41.0			57.6	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





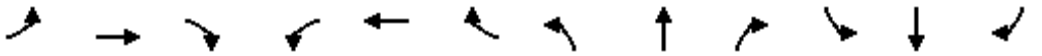
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	1091	90	303	1180	170	86	237	869	177	101	81
v/c Ratio	0.51	0.80	0.15	0.77	0.71	0.25	0.54	0.22	0.86	0.88	0.09	0.13
Control Delay	64.5	40.5	4.0	81.2	28.3	4.0	73.4	33.6	39.8	99.3	30.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	40.5	4.0	81.2	28.3	4.0	73.4	33.6	39.8	99.3	30.4	0.5
Queue Length 50th (ft)	42	313	6	136	206	7	37	77	292	~84	31	0
Queue Length 95th (ft)	m67	350	m17	m#224	m325	m34	65	105	365	#162	50	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	194	1368	589	395	1672	684	160	1235	1131	201	1257	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.80	0.15	0.77	0.71	0.25	0.54	0.19	0.77	0.88	0.08	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	993	82	276	1074	155	78	216	791	161	92	74
Future Volume (veh/h)	89	993	82	276	1074	155	78	216	791	161	92	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	1091	90	303	1180	170	86	237	869	177	101	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	155	1404	490	308	1649	561	152	1183	929	167	1212	541
Arrive On Green	0.09	0.62	0.62	0.18	0.71	0.71	0.04	0.33	0.33	0.05	0.34	0.34
Sat Flow, veh/h	3456	4540	1585	3456	4661	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	98	1091	90	303	1180	170	86	237	869	177	101	81
Grp Sat Flow(s),veh/h/ln	1728	1513	1585	1728	1554	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	3.6	22.9	3.2	11.4	19.5	5.2	3.2	6.2	39.2	6.3	2.5	4.6
Cycle Q Clear(g_c), s	3.6	22.9	3.2	11.4	19.5	5.2	3.2	6.2	39.2	6.3	2.5	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	1404	490	308	1649	561	152	1183	929	167	1212	541
V/C Ratio(X)	0.63	0.78	0.18	0.98	0.72	0.30	0.56	0.20	0.94	1.06	0.08	0.15
Avail Cap(c_a), veh/h	162	1404	490	308	1649	561	159	1241	974	167	1263	563
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	21.5	17.7	53.3	15.1	13.0	60.9	31.0	42.0	61.8	29.0	29.7
Incr Delay (d2), s/veh	5.1	3.0	0.6	36.7	1.8	0.9	4.2	0.1	15.3	85.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.3	1.2	5.9	4.2	1.7	1.5	2.6	14.9	4.7	1.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	24.5	18.3	90.0	16.9	13.9	65.1	31.1	57.3	147.3	29.1	29.9
LnGrp LOS	E	C	B	F	B	B	E	C	E	F	C	C
Approach Vol, veh/h		1279			1653			1192			359	
Approach Delay, s/veh		27.0			30.0			52.6			87.5	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	53.1	12.6	51.0	19.1	47.3	13.7	49.9
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.6	21.5	5.2	6.6	13.4	24.9	8.3	41.2
Green Ext Time (p_c), s	0.0	14.6	0.0	0.9	0.0	9.0	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	39.8
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	99.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	225	339	384	111	86	106
Future Vol, veh/h	225	339	384	111	86	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	369	556	630	182	141	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	812	0	-	0	1924	630
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	1294	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	810	-	-	-	~ 72	476
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	810	-	-	-	~ 39	476
Mov Cap-2 Maneuver	-	-	-	-	~ 39	-
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	253	-

Approach	EB	WB	SB
HCM Control Delay, s	5.2	0	$ 632
HCM LOS			F

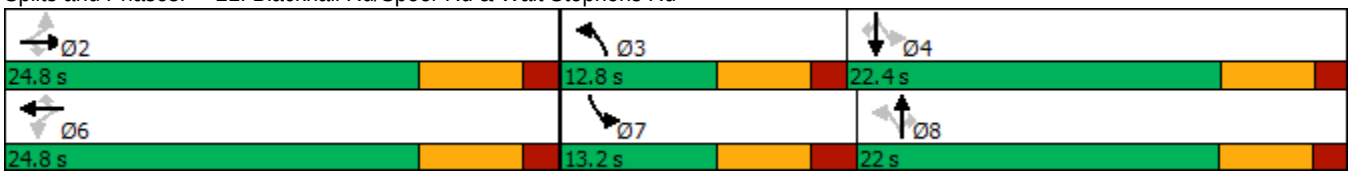
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	810	-	-	-	39	476
HCM Lane V/C Ratio	0.455	-	-	-	3.615	0.365
HCM Control Delay (s)	13.1	-	-	-	$ 1390.2	16.8
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	2.4	-	-	-	16	1.7

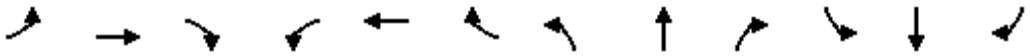
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	275	59	121	327	638	52	399	102	210	84	16
Future Volume (vph)	34	275	59	121	327	638	52	399	102	210	84	16
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	17.8	17.8	17.8	17.8	17.8	17.8	22.8	15.8	15.8	25.2	21.6	21.6
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.39	0.27	0.27	0.43	0.37	0.37
v/c Ratio	0.17	0.55	0.11	0.51	0.66	0.54	0.10	0.90	0.21	0.69	0.14	0.03
Control Delay	17.6	21.7	0.4	24.8	24.7	3.3	9.0	45.5	2.5	23.8	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	21.7	0.4	24.8	24.7	3.3	9.0	45.5	2.5	23.8	16.4	0.1
LOS	B	C	A	C	C	A	A	D	A	C	B	A
Approach Delay		17.9			12.1			34.1			20.6	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 58.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 19.4	Intersection LOS: B
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd

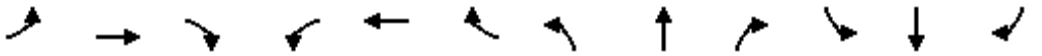




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	309	66	136	367	717	58	448	115	236	94	18
v/c Ratio	0.17	0.55	0.11	0.51	0.66	0.54	0.10	0.90	0.21	0.69	0.14	0.03
Control Delay	17.6	21.7	0.4	24.8	24.7	3.3	9.0	45.5	2.5	23.8	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	21.7	0.4	24.8	24.7	3.3	9.0	45.5	2.5	23.8	16.4	0.1
Queue Length 50th (ft)	10	91	0	40	113	0	10	155	0	47	26	0
Queue Length 95th (ft)	30	157	0	88	190	34	26	#302	16	#124	56	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	231	586	604	281	580	1359	558	513	555	342	682	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.53	0.11	0.48	0.63	0.53	0.10	0.87	0.21	0.69	0.14	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	275	59	121	327	638	52	399	102	210	84	16
Future Volume (veh/h)	34	275	59	121	327	638	52	399	102	210	84	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	309	66	136	367	717	58	448	115	236	94	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	193	577	489	293	573	854	592	499	423	361	596	505
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.27	0.27	0.12	0.32	0.32
Sat Flow, veh/h	520	1870	1585	1000	1856	2768	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	38	309	66	136	367	717	58	448	115	236	94	18
Grp Sat Flow(s),veh/h/ln	520	1870	1585	1000	1856	1384	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.0	8.2	1.8	7.8	10.2	14.4	1.3	13.8	3.4	5.6	2.1	0.5
Cycle Q Clear(g_c), s	14.2	8.2	1.8	15.9	10.2	14.4	1.3	13.8	3.4	5.6	2.1	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	577	489	293	573	854	592	499	423	361	596	505
V/C Ratio(X)	0.20	0.54	0.13	0.46	0.64	0.84	0.10	0.90	0.27	0.65	0.16	0.04
Avail Cap(c_a), veh/h	194	581	492	294	576	859	672	508	431	361	596	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	17.1	14.9	23.7	17.8	19.2	13.4	21.1	17.3	15.0	14.6	14.0
Incr Delay (d2), s/veh	1.1	1.8	0.3	2.4	3.4	8.1	0.1	18.4	0.3	4.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.2	0.6	1.8	4.1	4.8	0.4	7.6	1.1	2.2	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	18.8	15.1	26.1	21.1	27.4	13.5	39.4	17.6	19.2	14.7	14.0
LnGrp LOS	C	B	B	C	C	C	B	D	B	B	B	B
Approach Vol, veh/h		413			1220			621			348	
Approach Delay, s/veh		18.8			25.3			33.0			17.7	
Approach LOS		B			C			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.7	10.1	24.8		24.7	13.2	21.7				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		16.2	3.3	4.1		17.9	7.6	15.8				
Green Ext Time (p_c), s		0.8	0.0	0.3		0.5	0.0	0.1				

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

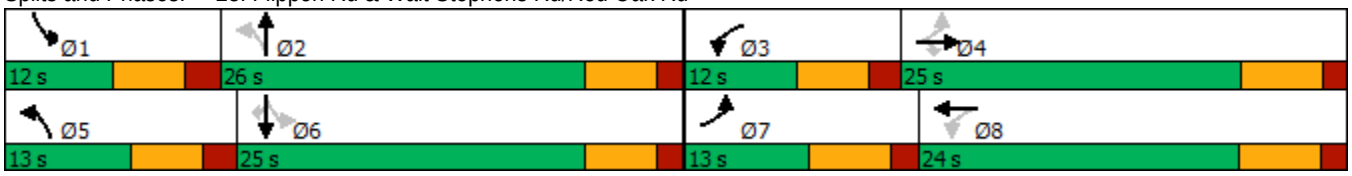
Notes

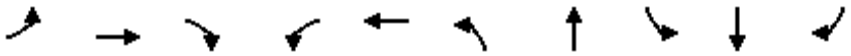
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	228	177	461	22	192	340	388	23	306	194
Future Volume (vph)	228	177	461	22	192	340	388	23	306	194
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	25.0	22.5	22.5	20.2	13.7	28.4	26.2	23.2	17.6	17.6
Actuated g/C Ratio	0.36	0.32	0.32	0.29	0.20	0.41	0.38	0.33	0.25	0.25
v/c Ratio	0.70	0.33	0.60	0.06	0.67	1.08	0.64	0.08	0.74	0.39
Control Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
LOS	C	C	A	B	C	F	C	B	D	A
Approach Delay		15.3			32.8		57.0		23.4	
Approach LOS		B			C		E		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 69.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 32.0	Intersection LOS: C
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



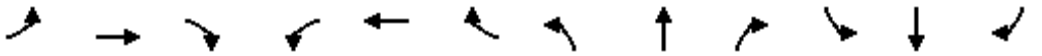


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	253	197	512	24	245	378	451	26	340	216
v/c Ratio	0.70	0.33	0.60	0.06	0.67	1.08	0.64	0.08	0.74	0.39
Control Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	22.0	5.8	14.0	34.6	92.9	26.9	13.1	35.3	5.9
Queue Length 50th (ft)	78	58	0	6	97	~118	136	6	134	0
Queue Length 95th (ft)	#160	135	74	20	167	#297	#369	20	#255	48
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	363	608	862	395	477	351	701	311	515	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.32	0.59	0.06	0.51	1.08	0.64	0.08	0.66	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	177	461	22	192	29	340	388	18	23	306	194
Future Volume (veh/h)	228	177	461	22	192	29	340	388	18	23	306	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	253	197	0	24	213	32	378	431	20	26	340	216
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	352	471		362	271	41	365	559	26	261	444	376
Arrive On Green	0.11	0.25	0.00	0.03	0.17	0.17	0.11	0.32	0.32	0.03	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1767	1576	237	1781	1773	82	1753	1841	1560
Grp Volume(v), veh/h	253	197	0	24	0	245	378	0	451	26	340	216
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1813	1781	0	1856	1753	1841	1560
Q Serve(g_s), s	6.9	5.7	0.0	0.7	0.0	8.3	7.0	0.0	14.1	0.7	11.0	7.8
Cycle Q Clear(g_c), s	6.9	5.7	0.0	0.7	0.0	8.3	7.0	0.0	14.1	0.7	11.0	7.8
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	352	471		362	0	312	365	0	585	261	444	376
V/C Ratio(X)	0.72	0.42		0.07	0.00	0.79	1.04	0.00	0.77	0.10	0.77	0.57
Avail Cap(c_a), veh/h	352	553		475	0	505	365	0	589	364	556	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	20.1	0.0	20.6	0.0	25.5	21.3	0.0	19.9	17.8	22.7	21.5
Incr Delay (d2), s/veh	6.9	0.6	0.0	0.1	0.0	4.4	56.5	0.0	7.2	0.2	7.2	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.2	0.0	0.3	0.0	3.7	7.5	0.0	6.3	0.3	5.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	20.7	0.0	20.7	0.0	29.8	77.8	0.0	27.1	18.0	29.9	24.4
LnGrp LOS	C	C		C	A	C	F	A	C	B	C	C
Approach Vol, veh/h		450	A		269			829			582	
Approach Delay, s/veh		24.3			29.0			50.2			27.4	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	25.9	7.9	22.3	13.0	21.1	13.0	17.2
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.7	16.1	2.7	7.7	9.0	13.0	8.9	10.3
Green Ext Time (p_c), s	0.0	1.6	0.0	0.7	0.0	2.4	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	8	634	5	4	465
Future Vol, veh/h	12	8	634	5	4	465
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	13	9	704	6	4	517

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1229	704	0	0	710	0
Stage 1	704	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	196	437	-	-	880	-
Stage 1	490	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	195	437	-	-	880	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	589	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	195	437	880	-
HCM Lane V/C Ratio	-	-	0.068	0.02	0.005	-
HCM Control Delay (s)	-	-	24.8	13.4	9.1	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1226	813	328	680	490	491
Future Volume (vph)	1226	813	328	680	490	491
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	69.8	69.8	22.6	98.5	37.1	37.1
Actuated g/C Ratio	0.47	0.47	0.15	0.66	0.25	0.25
v/c Ratio	0.98	0.57	0.80	0.37	0.77	0.55
Control Delay	60.7	3.4	75.4	13.1	59.8	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	3.4	75.4	13.1	59.8	5.3
LOS	E	A	E	B	E	A
Approach Delay	37.8			33.3	32.6	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1333	884	357	739	533	534
v/c Ratio	0.98	0.57	0.80	0.37	0.77	0.55
Control Delay	60.7	3.4	75.4	13.1	59.8	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	3.4	75.4	13.1	59.8	5.3
Queue Length 50th (ft)	676	0	175	162	251	0
Queue Length 95th (ft)	#950	45	231	237	295	46
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1354	1538	469	2008	898	1091
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.57	0.76	0.37	0.59	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1226	813	328	680	490	491
Future Volume (veh/h)	1226	813	328	680	490	491
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1333	884	357	739	533	534
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1351	1060	399	1965	765	618
Arrive On Green	0.46	0.46	0.13	0.63	0.27	0.27
Sat Flow, veh/h	3011	2303	3018	3185	2826	2281
Grp Volume(v), veh/h	1333	884	357	739	533	534
Grp Sat Flow(s),veh/h/ln	1467	1152	1509	1552	1413	1141
Q Serve(g_s), s	67.4	50.4	17.5	17.2	25.4	33.4
Cycle Q Clear(g_c), s	67.4	50.4	17.5	17.2	25.4	33.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1351	1060	399	1965	765	618
V/C Ratio(X)	0.99	0.83	0.89	0.38	0.70	0.86
Avail Cap(c_a), veh/h	1351	1060	449	1965	906	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	35.4	64.1	13.2	49.2	52.1
Incr Delay (d2), s/veh	21.5	7.7	18.7	0.6	2.3	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.6	14.4	7.6	5.8	8.9	20.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	61.6	43.2	82.7	13.8	51.4	62.1
LnGrp LOS	E	D	F	B	D	E
Approach Vol, veh/h	2217			1096	1067	
Approach Delay, s/veh	54.2			36.2	56.8	
Approach LOS	D			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		102.3		47.7	25.9	76.4
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		19.2		35.4	19.5	69.4
Green Ext Time (p_c), s		12.0		5.2	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1878	350	331	1135	379	450
Future Volume (vph)	1878	350	331	1135	379	450
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.9	83.9	112.0	111.9	25.1	25.1
Actuated g/C Ratio	0.56	0.56	0.75	0.75	0.17	0.17
v/c Ratio	1.19	0.35	1.12	0.54	0.69	0.63
Control Delay	119.5	3.9	130.8	9.7	65.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.5	3.9	130.8	9.7	65.0	19.5
LOS	F	A	F	A	E	B
Approach Delay	101.3			37.1	40.3	
Approach LOS	F			D	D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 69.3	Intersection LOS: E
Intersection Capacity Utilization 102.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1956	365	345	1182	395	469
v/c Ratio	1.19	0.35	1.12	0.54	0.69	0.63
Control Delay	119.5	3.9	130.8	9.7	65.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.5	3.9	130.8	9.7	65.0	19.5
Queue Length 50th (ft)	~1208	28	~336	233	190	65
Queue Length 95th (ft)	#1346	m43	#605	324	238	128
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1641	1046	308	2171	688	827
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.35	1.12	0.54	0.57	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1878	350	331	1135	379	450
Future Volume (veh/h)	1878	350	331	1135	379	450
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1956	365	345	1182	395	469
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1693	906	340	2127	652	526
Arrive On Green	1.00	1.00	0.11	0.72	0.19	0.19
Sat Flow, veh/h	3040	1585	1781	3011	3456	2790
Grp Volume(v), veh/h	1956	365	345	1182	395	469
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1728	1395
Q Serve(g_s), s	0.0	0.0	17.0	27.8	15.7	24.6
Cycle Q Clear(g_c), s	0.0	0.0	17.0	27.8	15.7	24.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1693	906	340	2127	652	526
V/C Ratio(X)	1.16	0.40	1.02	0.56	0.61	0.89
Avail Cap(c_a), veh/h	1693	906	340	2127	693	560
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	33.4	9.5	55.8	59.4
Incr Delay (d2), s/veh	72.7	0.5	53.0	1.1	1.7	16.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.1	16.8	8.1	7.0	18.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.7	0.5	86.4	10.6	57.5	75.7
LnGrp LOS	F	A	F	B	E	E
Approach Vol, veh/h	2321			1527	864	
Approach Delay, s/veh	61.3			27.7	67.4	
Approach LOS	E			C	E	

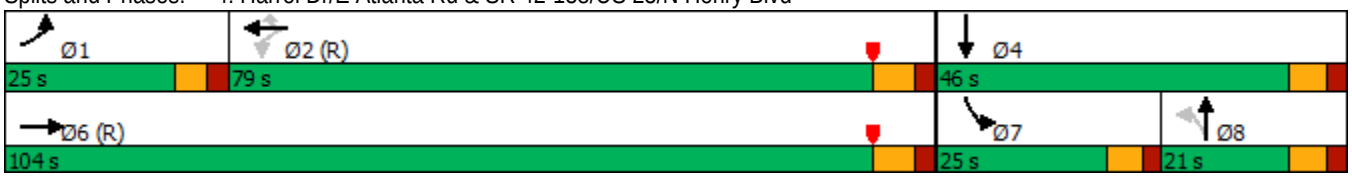
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		114.8		35.2	23.0	91.8
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		29.8		26.6	19.0	2.0
Green Ext Time (p_c), s		35.0		1.7	0.0	69.2

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	273	1768	18	1179	340	30	41	395	5
Future Volume (vph)	273	1768	18	1179	340	30	41	395	5
Turn Type	Prot	NA	Perm	NA	Perm	Perm	NA	Prot	NA
Protected Phases	1	6		2			8	7	4
Permitted Phases			2		2	8			
Detector Phase	1	6	2	2	2	8	8	7	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	5.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	11.0	14.7
Total Split (s)	25.0	104.0	79.0	79.0	79.0	21.0	21.0	25.0	46.0
Total Split (%)	16.7%	69.3%	52.7%	52.7%	52.7%	14.0%	14.0%	16.7%	30.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.0	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1	6.7	6.7	6.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	17.8	98.1	74.3	74.3	74.3	12.9	12.9	19.2	38.1
Actuated g/C Ratio	0.12	0.65	0.50	0.50	0.50	0.09	0.09	0.13	0.25
v/c Ratio	0.80	0.96	0.30	0.85	0.45	0.30	0.78	0.94	0.35
Control Delay	81.0	10.0	40.3	36.1	8.6	71.6	85.5	93.9	8.0
Queue Delay	0.0	43.0	0.0	0.5	0.0	0.0	0.3	3.9	0.0
Total Delay	81.0	53.0	40.3	36.6	8.6	71.6	85.8	97.8	8.0
LOS	F	D	D	D	A	E	F	F	A
Approach Delay		56.7		30.5			83.0		69.6
Approach LOS		E		C			F		E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 50.0	Intersection LOS: D
Intersection Capacity Utilization 100.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	284	1858	19	1228	354	31	127	411	188
v/c Ratio	0.80	0.96	0.30	0.85	0.45	0.30	0.78	0.94	0.35
Control Delay	81.0	10.0	40.3	36.1	8.6	71.6	85.5	93.9	8.0
Queue Delay	0.0	43.0	0.0	0.5	0.0	0.0	0.3	3.9	0.0
Total Delay	81.0	53.0	40.3	36.6	8.6	71.6	85.8	97.8	8.0
Queue Length 50th (ft)	134	341	12	456	19	29	102	208	4
Queue Length 95th (ft)	m121	m166	m25	541	90	65	#197	#313	65
Internal Link Dist (ft)		3939		643			194		367
Turn Bay Length (ft)	150		100						
Base Capacity (vph)	379	1932	64	1453	791	113	178	439	551
Starvation Cap Reductn	0	0	0	44	0	0	0	0	0
Spillback Cap Reductn	0	272	0	0	0	0	2	12	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	1.12	0.30	0.87	0.45	0.27	0.72	0.96	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	1768	15	18	1179	340	30	41	81	395	5	176
Future Volume (veh/h)	273	1768	15	18	1179	340	30	41	81	395	5	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	284	1842	16	19	1228	354	31	43	84	411	5	183
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	327	1983	17	77	1497	668	154	50	98	438	11	396
Arrive On Green	0.11	0.65	0.65	0.67	0.67	0.67	0.09	0.09	0.09	0.13	0.26	0.26
Sat Flow, veh/h	3045	3038	26	247	2962	1321	1195	566	1105	3456	42	1549
Grp Volume(v), veh/h	284	905	953	19	1228	354	31	0	127	411	0	188
Grp Sat Flow(s),veh/h/ln	1522	1495	1569	247	1481	1321	1195	0	1671	1728	0	1592
Q Serve(g_s), s	13.8	80.0	80.5	10.9	45.5	20.5	3.6	0.0	11.2	17.7	0.0	15.0
Cycle Q Clear(g_c), s	13.8	80.0	80.5	69.3	45.5	20.5	3.6	0.0	11.2	17.7	0.0	15.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.66	1.00		0.97
Lane Grp Cap(c), veh/h	327	976	1024	77	1497	668	154	0	148	438	0	407
V/C Ratio(X)	0.87	0.93	0.93	0.25	0.82	0.53	0.20	0.00	0.86	0.94	0.00	0.46
Avail Cap(c_a), veh/h	386	976	1024	77	1497	668	162	0	159	438	0	417
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.79	0.79	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.9	23.0	23.0	51.0	19.6	15.5	63.9	0.0	67.4	64.9	0.0	47.1
Incr Delay (d2), s/veh	1.9	2.0	2.0	6.0	4.1	2.4	0.6	0.0	32.7	28.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	26.7	28.2	0.8	13.9	5.7	1.2	0.0	6.2	9.5	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	25.0	25.0	57.1	23.7	17.9	64.6	0.0	100.1	93.1	0.0	48.0
LnGrp LOS	E	C	C	E	C	B	E	A	F	F	A	D
Approach Vol, veh/h		2142			1601			158			599	
Approach Delay, s/veh		30.7			22.9			93.1			79.0	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	22.1	82.9		45.0		105.0	25.0	20.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1	6.0	6.7				
Max Green Setting (Gmax), s	19.0	71.9		39.3		96.9	19.0	14.3				
Max Q Clear Time (g_c+I1), s	15.8	71.3		17.0		82.5	19.7	13.2				
Green Ext Time (p_c), s	0.3	0.6		1.1		13.4	0.0	0.1				

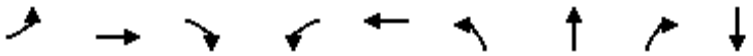
Intersection Summary												
HCM 6th Ctrl Delay			36.5									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	30	2052	372	258	1288	203	62	231	15	60
Future Volume (vph)	30	2052	372	258	1288	203	62	231	15	60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6	2		8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.6	94.3	94.3	114.0	106.2	22.6	22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.63	0.76	0.71	0.15	0.15	0.15		0.15
v/c Ratio	0.11	1.15	0.42	1.28	0.64	1.22	0.23	0.71		0.41
Control Delay	5.8	103.8	5.9	194.3	7.1	190.8	58.4	44.4		56.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	5.8	103.8	5.9	194.3	7.1	190.8	58.4	44.4		56.0
LOS	A	F	A	F	A	F	E	D		E
Approach Delay		87.7			37.9		106.0			56.0
Approach LOS		F			D		F			E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 72.1	Intersection LOS: E
Intersection Capacity Utilization 105.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





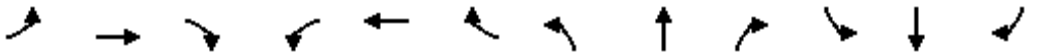
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	31	2094	380	263	1335	207	63	236	110
v/c Ratio	0.11	1.15	0.42	1.28	0.64	1.22	0.23	0.71	0.41
Control Delay	5.8	103.8	5.9	194.3	7.1	190.8	58.4	44.4	56.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	103.8	5.9	194.3	7.1	190.8	58.4	44.4	56.0
Queue Length 50th (ft)	7	~1266	52	~280	145	~247	55	119	87
Queue Length 95th (ft)	15	#1397	115	m#400	191	#417	102	220	153
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	284	1815	903	205	2090	170	280	332	267
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	1.15	0.42	1.28	0.64	1.22	0.23	0.71	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2052	372	258	1288	21	203	62	231	15	60	33
Future Volume (veh/h)	30	2052	372	258	1288	21	203	62	231	15	60	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	2094	380	263	1314	21	207	63	236	15	61	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	283	1827	815	204	2076	33	220	282	239	46	157	79
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2906	1296	1795	3012	48	1301	1870	1585	124	1041	521
Grp Volume(v), veh/h	31	2094	380	263	652	683	207	63	236	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1296	1795	1495	1565	1301	1870	1585	1686	0	0
Q Serve(g_s), s	0.9	94.3	23.1	13.0	36.1	36.1	14.2	4.4	22.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	94.3	23.1	13.0	36.1	36.1	22.6	4.4	22.3	8.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	0.14		0.31
Lane Grp Cap(c), veh/h	283	1827	815	204	1030	1078	220	282	239	281	0	0
V/C Ratio(X)	0.11	1.15	0.47	1.29	0.63	0.63	0.94	0.22	0.99	0.39	0.00	0.00
Avail Cap(c_a), veh/h	308	1827	815	204	1030	1078	220	282	239	281	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.6	27.9	14.6	57.4	12.9	12.9	66.4	56.0	63.6	57.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	72.8	1.9	146.7	1.3	1.3	45.0	0.8	54.9	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	47.7	6.8	15.8	11.8	12.3	10.7	2.2	12.6	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	100.6	16.5	204.1	14.2	14.1	111.4	56.8	118.5	59.6	0.0	0.0
LnGrp LOS	B	F	B	F	B	B	F	E	F	E	A	A
Approach Vol, veh/h		2505			1598			506			110	
Approach Delay, s/veh		86.8			45.4			107.9			59.6	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	110.0		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.9	38.1		10.4	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	30.5		0.7	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			74.4									
HCM 6th LOS			E									

Intersection	
Int Delay, s/veh	374.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	4	144	25	5	35	135	1317	37	38	2238	107
Future Vol, veh/h	34	4	144	25	5	35	135	1317	37	38	2238	107
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	35	4	150	26	5	36	141	1372	39	40	2331	111

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3382	4104	1166	2902	4176	686	2442	0	0	1411	0	0
Stage 1	2411	2411	-	1654	1654	-	-	-	-	-	-	-
Stage 2	971	1693	-	1248	2522	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	~ 2	187	~ 7	~ 2	390	189	-	-	479	-	-
Stage 1	~ 33	63	-	102	154	-	-	-	-	-	-	-
Stage 2	271	147	-	183	55	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 1	0	187	~ 1	0	390	189	-	-	479	-	-
Mov Cap-2 Maneuver	~ 1	0	-	~ 1	0	-	-	-	-	-	-	-
Stage 1	~ 8	58	-	~ 26	39	-	-	-	-	-	-	-
Stage 2	54	37	-	31	50	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	$ 5089.9	$ 9357.8	5.9	0.2
HCM LOS	F	F		

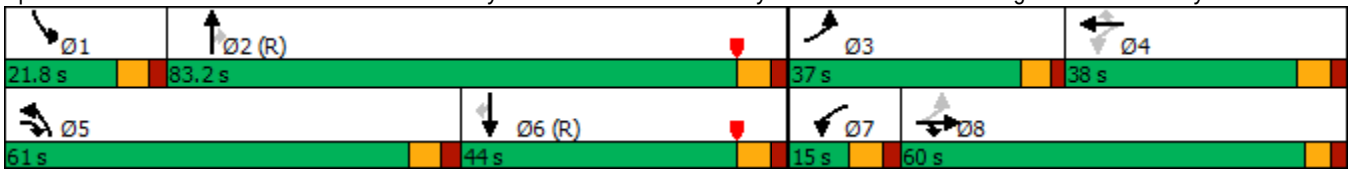
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	189	-	-	1	187	1	390	479	-	-
HCM Lane V/C Ratio	0.744	-	-	39.583	0.802	31.25	0.093	0.083	-	-
HCM Control Delay (s)	64.9	-	$ 24096.8	7	$ 20257.6	15.2	13.2	-	-	
HCM Lane LOS	F	-	-	F	F	F	C	B	-	-
HCM 95th %tile Q(veh)	4.8	-	-	7	5.5	5.8	0.3	0.3	-	-

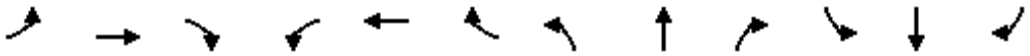
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	317	173	1478	125	172	126	852	494	71	70	795	170
Future Volume (vph)	317	173	1478	125	172	126	852	494	71	70	795	170
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	37.0	60.0		15.0	38.0	38.0	61.0	83.2	83.2	21.8	44.0	44.0
Total Split (%)	20.6%	33.3%		8.3%	21.1%	21.1%	33.9%	46.2%	46.2%	12.1%	24.4%	24.4%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	69.0	54.0	115.0	41.7	33.7	33.7	54.2	77.6	77.6	13.6	37.1	37.1
Actuated g/C Ratio	0.38	0.30	0.64	0.23	0.19	0.19	0.30	0.43	0.43	0.08	0.21	0.21
v/c Ratio	0.74	0.17	0.99	0.43	0.51	0.29	0.99	0.41	0.10	0.54	0.95	0.42
Control Delay	29.8	31.2	54.8	49.5	72.7	2.8	88.1	37.0	0.3	95.3	90.8	9.1
Queue Delay	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay	29.8	31.2	59.6	49.5	72.7	2.8	88.1	37.0	0.3	95.3	90.8	9.8
LOS	C	C	E	D	E	A	F	D	A	F	F	A
Approach Delay		52.3			45.1			65.9			77.8	
Approach LOS		D			D			E			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 61.1	Intersection LOS: E
Intersection Capacity Utilization 90.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy



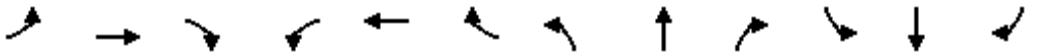


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	330	180	1540	130	179	131	888	515	74	73	828	177
v/c Ratio	0.74	0.17	0.99	0.43	0.51	0.29	0.99	0.41	0.10	0.54	0.95	0.42
Control Delay	29.8	31.2	54.8	49.5	72.7	2.8	88.1	37.0	0.3	95.3	90.8	9.1
Queue Delay	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay	29.8	31.2	59.6	49.5	72.7	2.8	88.1	37.0	0.3	95.3	90.8	9.8
Queue Length 50th (ft)	266	75	941	103	197	0	541	223	0	84	358	0
Queue Length 95th (ft)	m260	m74	m935	160	285	9	#687	278	0	145	#449	63
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	463	1061	1551	301	348	446	901	1244	764	146	869	418
Starvation Cap Reductn	0	0	30	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	68
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.17	1.01	0.43	0.51	0.29	0.99	0.41	0.10	0.50	0.95	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	173	1478	125	172	126	852	494	71	70	795	170
Future Volume (veh/h)	317	173	1478	125	172	126	852	494	71	70	795	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	330	180	1540	130	179	131	888	515	74	73	828	177
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	433	1066	1475	174	366	310	914	1476	805	91	1104	343
Arrive On Green	0.05	0.10	0.10	0.04	0.20	0.20	0.30	0.51	0.51	0.05	0.26	0.26
Sat Flow, veh/h	1781	3554	2458	1781	1870	1585	3045	2906	1585	1781	4256	1321
Grp Volume(v), veh/h	330	180	1540	130	179	131	888	515	74	73	828	177
Grp Sat Flow(s),veh/h/ln	1781	1777	1229	1781	1870	1585	1522	1453	1585	1781	1419	1321
Q Serve(g_s), s	25.5	8.4	54.0	8.0	15.3	13.0	51.9	19.1	4.3	7.3	32.2	20.6
Cycle Q Clear(g_c), s	25.5	8.4	54.0	8.0	15.3	13.0	51.9	19.1	4.3	7.3	32.2	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	433	1066	1475	174	366	310	914	1476	805	91	1104	343
V/C Ratio(X)	0.76	0.17	1.04	0.75	0.49	0.42	0.97	0.35	0.09	0.80	0.75	0.52
Avail Cap(c_a), veh/h	465	1066	1475	174	366	310	917	1476	805	147	1104	343
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	60.5	38.6	58.7	64.4	63.5	62.2	26.5	22.9	84.5	61.3	57.0
Incr Delay (d2), s/veh	0.6	0.0	22.1	16.4	1.2	1.1	22.9	0.7	0.2	34.5	4.7	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	3.9	27.1	2.5	7.6	5.3	22.6	6.7	1.7	4.2	11.9	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	60.5	60.6	75.2	65.6	64.6	85.2	27.2	23.1	119.0	66.0	62.5
LnGrp LOS	D	E	F	E	E	E	F	C	C	F	E	E
Approach Vol, veh/h		2050			440			1477			1078	
Approach Delay, s/veh		59.3			68.2			61.8			69.0	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	98.4	33.8	42.2	60.8	53.6	15.0	61.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	14.9	76.3	31.0	31.0	54.2	37.1	8.0	* 54
Max Q Clear Time (g_c+I1), s	9.3	21.1	27.5	17.3	53.9	34.2	10.0	56.0
Green Ext Time (p_c), s	0.1	8.2	0.3	1.5	0.2	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.9
HCM 6th LOS	E

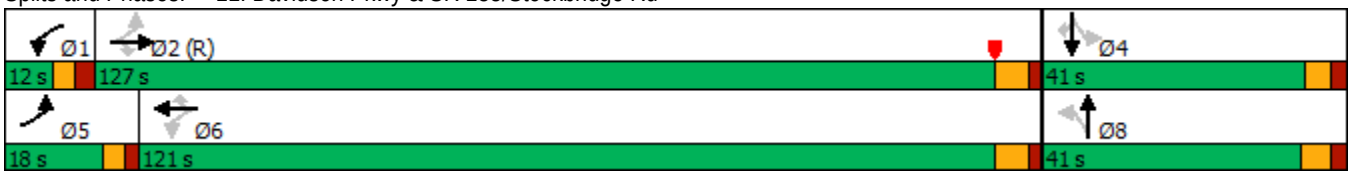
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	2166	460	51	1406	61	306	28	70	27	188
Future Volume (vph)	165	2166	460	51	1406	61	306	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	18.0	127.0	127.0	12.0	121.0	121.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	10.0%	70.6%	70.6%	6.7%	67.2%	67.2%	22.8%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	130.5	120.5	120.5	121.5	114.3	114.3	37.3	37.3	37.6	37.6	37.6
Actuated g/C Ratio	0.72	0.67	0.67	0.68	0.64	0.64	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.72	0.82	0.42	0.45	0.81	0.06	1.12	0.23	0.28	0.07	0.47
Control Delay	23.5	27.2	6.6	37.5	26.4	0.8	149.9	29.4	64.8	60.1	30.2
Queue Delay	0.0	46.9	1.6	0.0	0.8	0.0	11.3	0.0	0.0	0.0	6.8
Total Delay	23.5	74.1	8.2	37.5	27.2	0.8	161.1	29.4	64.8	60.1	37.1
LOS	C	E	A	D	C	A	F	C	E	E	D
Approach Delay		60.3			26.5			132.2		46.0	
Approach LOS		E			C			F		D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 54.8	Intersection LOS: D
Intersection Capacity Utilization 86.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





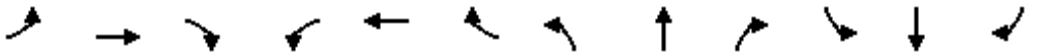
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	172	2256	479	53	1465	64	319	90	73	28	196
v/c Ratio	0.72	0.82	0.42	0.45	0.81	0.06	1.12	0.23	0.28	0.07	0.47
Control Delay	23.5	27.2	6.6	37.5	26.4	0.8	149.9	29.4	64.8	60.1	30.2
Queue Delay	0.0	46.9	1.6	0.0	0.8	0.0	11.3	0.0	0.0	0.0	6.8
Total Delay	23.5	74.1	8.2	37.5	27.2	0.8	161.1	29.4	64.8	60.1	37.1
Queue Length 50th (ft)	55	811	103	12	891	3	~455	38	75	28	85
Queue Length 95th (ft)	m89	921	226	m36	983	m4	#666	95	130	60	175
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	259	2760	1149	120	1848	1051	285	388	263	389	421
Starvation Cap Reductn	0	723	473	0	145	0	0	0	0	0	0
Spillback Cap Reductn	0	136	0	0	45	0	146	6	2	0	175
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	1.11	0.71	0.44	0.86	0.06	2.29	0.24	0.28	0.07	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	2166	460	51	1406	61	306	28	59	70	27	188
Future Volume (veh/h)	165	2166	460	51	1406	61	306	28	59	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2256	0	53	1465	64	319	29	61	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	347	2794		206	1912	1053	249	104	218	232	361	306
Arrive On Green	0.09	1.00	0.00	0.06	1.00	1.00	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	4135	1585	1781	2878	1585	1157	537	1130	1307	1870	1585
Grp Volume(v), veh/h	172	2256	0	53	1465	64	319	0	90	73	28	196
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1781	1439	1585	1157	0	1667	1307	1870	1585
Q Serve(g_s), s	6.0	0.0	0.0	1.7	0.0	0.0	32.5	0.0	8.3	9.1	2.2	20.5
Cycle Q Clear(g_c), s	6.0	0.0	0.0	1.7	0.0	0.0	34.7	0.0	8.3	17.4	2.2	20.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		1.00
Lane Grp Cap(c), veh/h	347	2794		206	1912	1053	249	0	321	232	361	306
V/C Ratio(X)	0.50	0.81		0.26	0.77	0.06	1.28	0.00	0.28	0.32	0.08	0.64
Avail Cap(c_a), veh/h	395	2794		215	1912	1053	249	0	321	234	364	308
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	0.0	8.3	0.0	0.0	76.4	0.0	62.0	69.4	59.5	66.9
Incr Delay (d2), s/veh	0.6	1.4	0.0	0.5	1.7	0.0	154.0	0.0	0.5	0.8	0.1	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.4	0.0	0.6	0.4	0.0	22.4	0.0	3.6	3.1	1.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	1.4	0.0	8.8	1.7	0.0	230.4	0.0	62.5	70.2	59.6	71.3
LnGrp LOS	A	A		A	A	A	F	A	E	E	E	E
Approach Vol, veh/h		2428	A		1582			409			297	
Approach Delay, s/veh		1.9			1.8			193.4			69.9	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	127.9		41.0	13.1	125.9		41.0				
Change Period (Y+Rc), s	5.5	* 6.3		* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 1.2E2		* 35	13.0	* 1.1E2		* 35				
Max Q Clear Time (g_c+I1), s	3.7	2.0		22.5	8.0	2.0		36.7				
Green Ext Time (p_c), s	0.0	89.3		0.8	0.2	45.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		22.8	
HCM 6th LOS		C	

Notes

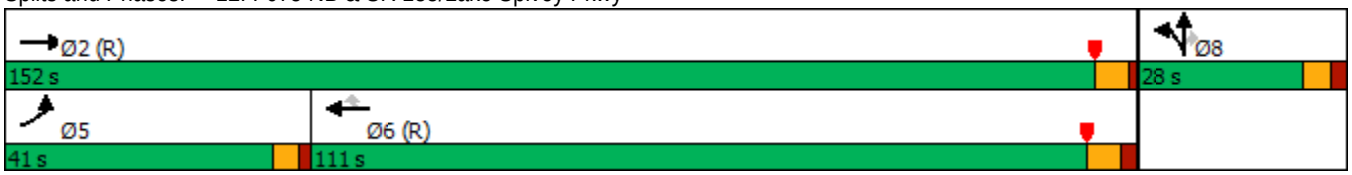
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	491	2619	1642	339	0	211
Future Volume (vph)	491	2619	1642	339	0	211
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	31.4	151.7	114.3	114.3	16.2	16.2
Actuated g/C Ratio	0.17	0.84	0.64	0.64	0.09	0.09
v/c Ratio	0.85	0.79	0.94	0.33	0.44	0.73
Control Delay	87.6	4.4	35.5	9.3	85.1	73.8
Queue Delay	0.0	6.6	44.6	1.0	0.0	0.1
Total Delay	87.6	11.0	80.1	10.3	85.1	73.9
LOS	F	B	F	B	F	E
Approach Delay		23.0	68.1		76.6	
Approach LOS		C	E		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 42.4	Intersection LOS: D
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy



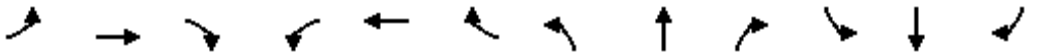


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	511	2728	1710	353	69	220
v/c Ratio	0.85	0.79	0.94	0.33	0.44	0.73
Control Delay	87.6	4.4	35.5	9.3	85.1	73.8
Queue Delay	0.0	6.6	44.6	1.0	0.0	0.1
Total Delay	87.6	11.0	80.1	10.3	85.1	73.9
Queue Length 50th (ft)	329	264	607	69	79	110
Queue Length 95th (ft)	m332	272	m#1208	m166	133	160
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	687	3470	1819	1079	215	387
Starvation Cap Reductn	0	266	300	467	0	0
Spillback Cap Reductn	0	711	0	0	0	9
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.99	1.13	0.58	0.32	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	491	2619	0	0	1642	339	66	0	211	0	0	0
Future Volume (veh/h)	491	2619	0	0	1642	339	66	0	211	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	511	2728	0	0	1710	353	69	0	220			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	555	3454	0	0	1862	1026	164	0	256			
Arrive On Green	0.32	1.00	0.00	0.00	0.65	0.65	0.09	0.00	0.09			
Sat Flow, veh/h	3456	4271	0	0	2954	1585	1781	0	2790			
Grp Volume(v), veh/h	511	2728	0	0	1710	353	69	0	220			
Grp Sat Flow(s),veh/h/ln	1728	1378	0	0	1439	1585	1781	0	1395			
Q Serve(g_s), s	25.7	0.0	0.0	0.0	93.0	18.2	6.6	0.0	14.0			
Cycle Q Clear(g_c), s	25.7	0.0	0.0	0.0	93.0	18.2	6.6	0.0	14.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	555	3454	0	0	1862	1026	164	0	256			
V/C Ratio(X)	0.92	0.79	0.00	0.00	0.92	0.34	0.42	0.00	0.86			
Avail Cap(c_a), veh/h	691	3454	0	0	1862	1026	217	0	339			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.19	0.19	0.00	0.00	0.46	0.46	1.00	0.00	1.00			
Uniform Delay (d), s/veh	60.0	0.0	0.0	0.0	27.6	14.4	77.2	0.0	80.6			
Incr Delay (d2), s/veh	3.8	0.4	0.0	0.0	4.5	0.4	1.7	0.0	15.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.0	0.1	0.0	0.0	30.9	6.5	3.0	0.0	5.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.4	0.0	0.0	32.1	14.9	78.9	0.0	95.9			
LnGrp LOS	E	A	A	A	C	B	E	A	F			
Approach Vol, veh/h		3239			2063			289				
Approach Delay, s/veh		10.4			29.1			91.8				
Approach LOS		B			C			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		157.4			33.9	123.5		22.6				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			27.7	95.0		16.0				
Green Ext Time (p_c), s		128.2			1.2	8.5		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

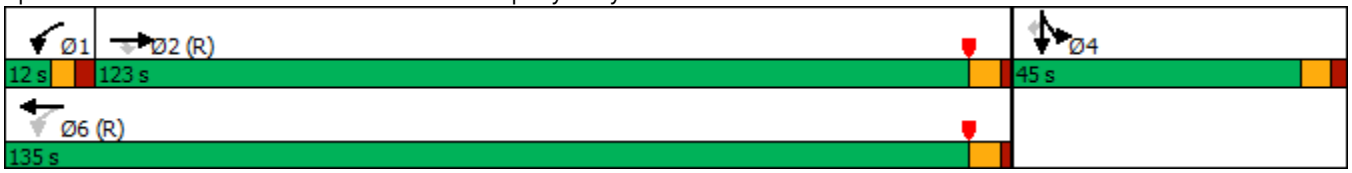
Notes

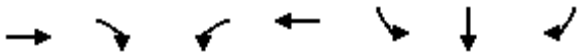
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2503	80	132	1575	636	0	795
Future Volume (vph)	2503	80	132	1575	636	0	795
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	0.96	0.10	1.35	0.79	0.91	0.91	1.38
Control Delay	25.9	7.0	221.2	14.2	98.2	98.2	228.8
Queue Delay	25.4	0.0	0.0	2.4	0.0	0.0	0.0
Total Delay	51.3	7.0	221.2	16.5	98.2	98.2	228.8
LOS	D	A	F	B	F	F	F
Approach Delay	49.9			32.3		170.8	
Approach LOS	D			C		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 74.9	Intersection LOS: E
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





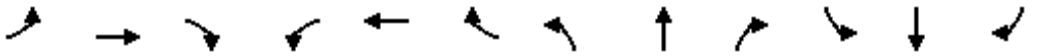
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2580	82	136	1624	328	328	820
v/c Ratio	0.96	0.10	1.35	0.79	0.91	0.91	1.38
Control Delay	25.9	7.0	221.2	14.2	98.2	98.2	228.8
Queue Delay	25.4	0.0	0.0	2.4	0.0	0.0	0.0
Total Delay	51.3	7.0	221.2	16.5	98.2	98.2	228.8
Queue Length 50th (ft)	582	13	~161	231	404	404	~725
Queue Length 95th (ft)	m467	m16	m#189	m282	#605	#605	#875
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2678	853	101	2054	359	359	596
Starvation Cap Reductn	239	0	0	77	0	0	0
Spillback Cap Reductn	0	0	0	294	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.10	1.35	0.92	0.91	0.91	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2503	80	132	1575	0	0	0	0	636	0	795
Future Volume (veh/h)	0	2503	80	132	1575	0	0	0	0	636	0	795
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2580	82	136	1624	0				656	0	820
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	2690	835	173	2064	0				762	0	678
Arrive On Green	0.00	1.00	1.00	0.07	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1284	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	2580	82	136	1624	0				656	0	820
Grp Sat Flow(s),veh/h/ln	0	1378	1284	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	4.8	0.0	0.0				31.9	0.0	38.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.8	0.0	0.0				31.9	0.0	38.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2690	835	173	2064	0				762	0	678
V/C Ratio(X)	0.00	0.96	0.10	0.79	0.79	0.00				0.86	0.00	1.21
Avail Cap(c_a), veh/h	0	2690	835	173	2064	0				762	0	678
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.23	0.23	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.5	0.0	0.0				68.2	0.0	70.8
Incr Delay (d2), s/veh	0.0	1.3	0.0	5.1	0.7	0.0				10.0	0.0	107.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	1.9	0.2	0.0				15.4	0.0	25.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.3	0.0	20.6	0.7	0.0				78.2	0.0	178.4
LnGrp LOS	A	A	A	C	A	A				E	A	F
Approach Vol, veh/h		2662			1760						1476	
Approach Delay, s/veh		1.3			2.3						133.8	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0						
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9						
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1						
Max Q Clear Time (g_c+I1), s	6.8	2.0		40.5		2.0						
Green Ext Time (p_c), s	0.0	101.8		0.0		57.0						

Intersection Summary												
HCM 6th Ctrl Delay			34.7									
HCM 6th LOS			C									

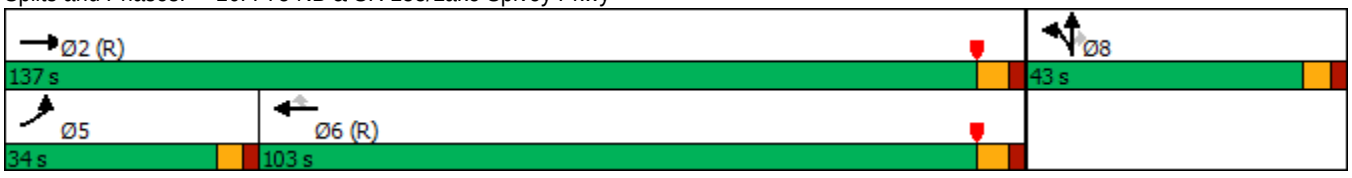
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	320	2164	1495	572	262	0	191
Future Volume (vph)	320	2164	1495	572	262	0	191
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	23.4	144.8	115.9	115.9	22.2	22.2	22.2
Actuated g/C Ratio	0.13	0.80	0.64	0.64	0.12	0.12	0.12
v/c Ratio	0.78	0.92	0.79	0.32	0.69	0.69	0.85
Control Delay	73.4	30.8	10.4	0.4	91.3	91.7	83.8
Queue Delay	0.0	45.6	7.4	0.0	0.1	0.1	0.1
Total Delay	73.4	76.4	17.8	0.4	91.4	91.8	83.8
LOS	E	E	B	A	F	F	F
Approach Delay		76.0	13.0			88.3	
Approach LOS		E	B			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 51.1	Intersection LOS: D
Intersection Capacity Utilization 94.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy

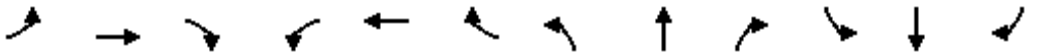




Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	348	2352	1625	622	142	143	208
v/c Ratio	0.78	0.92	0.79	0.32	0.69	0.69	0.85
Control Delay	73.4	30.8	10.4	0.4	91.3	91.7	83.8
Queue Delay	0.0	45.6	7.4	0.0	0.1	0.1	0.1
Total Delay	73.4	76.4	17.8	0.4	91.4	91.8	83.8
Queue Length 50th (ft)	209	1308	127	1	171	173	180
Queue Length 95th (ft)	m210	m1191	m656	m3	245	246	269
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	545	2570	2056	1916	344	344	369
Starvation Cap Reductn	0	523	246	0	0	0	0
Spillback Cap Reductn	0	234	399	0	14	14	4
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	1.15	0.98	0.32	0.43	0.43	0.57

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	2164	0	0	1495	572	262	0	191	0	0	0
Future Volume (veh/h)	320	2164	0	0	1495	572	262	0	191	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	348	2352	0	0	1625	622	285	0	208			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	394	2542	0	0	2072	1782	514	0	229			
Arrive On Green	0.15	1.00	0.00	0.00	1.00	1.00	0.14	0.00	0.14			
Sat Flow, veh/h	3456	3329	0	0	3329	2790	3563	0	1585			
Grp Volume(v), veh/h	348	2352	0	0	1625	622	285	0	208			
Grp Sat Flow(s),veh/h/ln	1728	1622	0	0	1622	1395	1781	0	1585			
Q Serve(g_s), s	17.8	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.3			
Cycle Q Clear(g_c), s	17.8	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	394	2542	0	0	2072	1782	514	0	229			
V/C Ratio(X)	0.88	0.93	0.00	0.00	0.78	0.35	0.55	0.00	0.91			
Avail Cap(c_a), veh/h	547	2542	0	0	2072	1782	730	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.11	0.11	1.00	0.00	1.00			
Uniform Delay (d), s/veh	75.2	0.0	0.0	0.0	0.0	0.0	71.6	0.0	75.9			
Incr Delay (d2), s/veh	1.3	0.8	0.0	0.0	0.3	0.1	0.3	0.0	18.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.6	0.3	0.0	0.0	0.1	0.0	6.0	0.0	10.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.4	0.8	0.0	0.0	0.3	0.1	72.0	0.0	94.3			
LnGrp LOS	E	A	A	A	A	A	E	A	F			
Approach Vol, veh/h		2700			2247			493				
Approach Delay, s/veh		10.5			0.3			81.4				
Approach LOS		B			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		147.9			26.0	121.9		32.1				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			19.8	2.0		25.3				
Green Ext Time (p_c), s		107.4			0.8	67.9		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

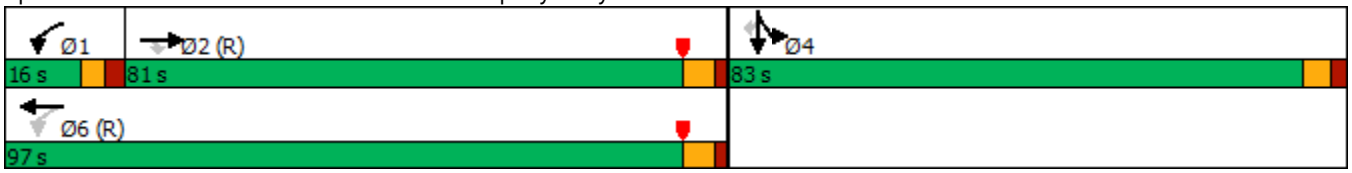
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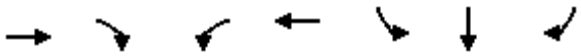
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1488	328	192	1662	997	0	846
Future Volume (vph)	1488	328	192	1662	997	0	846
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	98.6	98.1	69.4	69.4	69.4
Actuated g/C Ratio	0.42	0.42	0.55	0.54	0.39	0.39	0.39
v/c Ratio	1.19	0.41	0.95	1.02	0.82	0.82	0.81
Control Delay	127.7	4.8	87.6	49.4	60.2	60.4	52.3
Queue Delay	0.0	0.0	0.0	7.8	55.3	55.3	0.0
Total Delay	127.7	4.8	87.6	57.2	115.6	115.7	52.3
LOS	F	A	F	E	F	F	D
Approach Delay	105.5			60.4		86.6	
Approach LOS	F			E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 84.0	Intersection LOS: F
Intersection Capacity Utilization 94.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





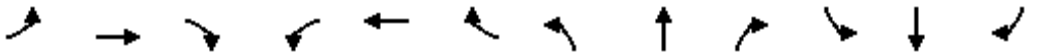
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1583	349	204	1768	530	531	900
v/c Ratio	1.19	0.41	0.95	1.02	0.82	0.82	0.81
Control Delay	127.7	4.8	87.6	49.4	60.2	60.4	52.3
Queue Delay	0.0	0.0	0.0	7.8	55.3	55.3	0.0
Total Delay	127.7	4.8	87.6	57.2	115.6	115.7	52.3
Queue Length 50th (ft)	~1164	29	~208	~1204	580	581	502
Queue Length 95th (ft)	#1320	m78	m#414	#1370	714	717	571
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	861	215	1741	717	717	1220
Starvation Cap Reductn	0	0	0	39	0	0	0
Spillback Cap Reductn	0	0	0	0	342	342	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.41	0.95	1.04	1.41	1.42	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1488	328	192	1662	0	0	0	0	997	0	846
Future Volume (veh/h)	0	1488	328	192	1662	0	0	0	0	997	0	846
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1583	349	204	1768	0				1061	0	900
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1623	793	256	1911	0				1216	0	1082
Arrive On Green	0.00	1.00	1.00	0.06	0.59	0.00				0.34	0.00	0.34
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	3170
Grp Volume(v), veh/h	0	1583	349	204	1768	0				1061	0	900
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.1	88.6	0.0				50.3	0.0	47.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.1	88.6	0.0				50.3	0.0	47.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1623	793	256	1911	0				1216	0	1082
V/C Ratio(X)	0.00	0.98	0.44	0.80	0.93	0.00				0.87	0.00	0.83
Avail Cap(c_a), veh/h	0	1623	793	256	1911	0				1520	0	1353
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.64	0.64	0.53	0.53	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	19.1	33.4	0.0				55.6	0.0	54.5
Incr Delay (d2), s/veh	0.0	13.0	1.1	9.0	5.3	0.0				4.9	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	0.3	4.8	34.4	0.0				22.7	0.0	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.0	1.1	28.1	38.7	0.0				60.5	0.0	58.2
LnGrp LOS	A	B	A	C	D	A				E	A	E
Approach Vol, veh/h		1932			1972						1961	
Approach Delay, s/veh		10.8			37.6						59.5	
Approach LOS		B			D						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	96.4		67.6		112.4
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	12.1	2.0		52.3		90.6
Green Ext Time (p_c), s	0.0	48.9		9.2		0.1

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

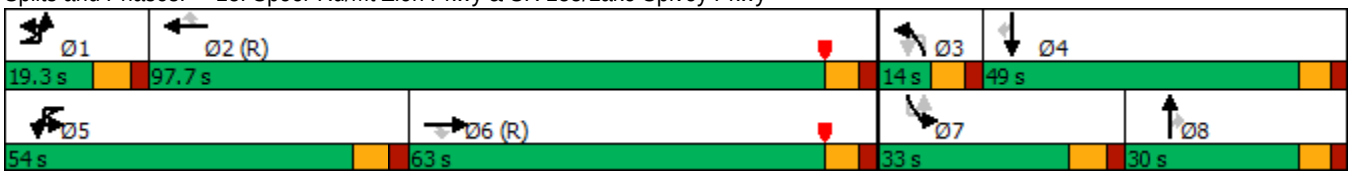
User approved volume balancing among the lanes for turning movement.

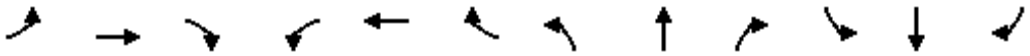
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	902	132	811	1105	310	82	194	320	442	401	181
Future Volume (vph)	159	902	132	811	1105	310	82	194	320	442	401	181
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	13.6	57.6	57.6	49.6	93.6	93.6	8.6	16.1	16.1	28.2	36.1	36.1
Actuated g/C Ratio	0.08	0.32	0.32	0.28	0.52	0.52	0.05	0.09	0.09	0.16	0.20	0.20
v/c Ratio	0.65	0.66	0.22	0.90	0.49	0.33	0.53	0.65	0.61	0.87	0.59	0.42
Control Delay	93.9	51.8	6.9	69.3	32.5	5.6	95.5	88.6	11.4	90.1	68.7	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.9	51.8	6.9	69.3	32.5	5.6	95.5	88.6	11.4	90.1	68.7	13.5
LOS	F	D	A	E	C	A	F	F	B	F	E	B
Approach Delay		52.5			42.2			48.0			68.2	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 50.6	Intersection LOS: D
Intersection Capacity Utilization 87.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy



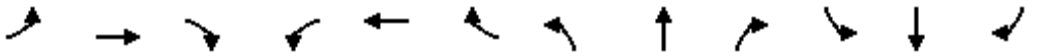


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	167	949	139	854	1163	326	86	204	337	465	422	191
v/c Ratio	0.65	0.66	0.22	0.90	0.49	0.33	0.53	0.65	0.61	0.87	0.59	0.42
Control Delay	93.9	51.8	6.9	69.3	32.5	5.6	95.5	88.6	11.4	90.1	68.7	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.9	51.8	6.9	69.3	32.5	5.6	95.5	88.6	11.4	90.1	68.7	13.5
Queue Length 50th (ft)	85	293	19	530	354	30	52	125	0	274	238	20
Queue Length 95th (ft)	136	383	52	m541	m347	m44	#89	168	55	#400	296	97
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	263	1465	652	952	2399	982	163	460	655	537	833	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.65	0.21	0.90	0.48	0.33	0.53	0.44	0.51	0.87	0.51	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	902	132	811	1105	310	82	194	320	442	401	181
Future Volume (veh/h)	159	902	132	811	1105	310	82	194	320	442	401	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	167	949	139	854	1163	326	86	204	337	465	422	191
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	203	1425	498	881	2378	809	122	462	363	491	852	380
Arrive On Green	0.12	0.63	0.63	0.43	0.85	0.85	0.04	0.13	0.13	0.14	0.24	0.24
Sat Flow, veh/h	3456	4540	1585	3456	4661	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	167	949	139	854	1163	326	86	204	337	465	422	191
Grp Sat Flow(s),veh/h/ln	1728	1513	1585	1728	1554	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	8.5	24.1	7.1	43.5	11.4	8.3	4.4	9.5	21.5	24.0	18.4	18.8
Cycle Q Clear(g_c), s	8.5	24.1	7.1	43.5	11.4	8.3	4.4	9.5	21.5	24.0	18.4	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	1425	498	881	2378	809	122	462	363	491	852	380
V/C Ratio(X)	0.82	0.67	0.28	0.97	0.49	0.40	0.70	0.44	0.93	0.95	0.50	0.50
Avail Cap(c_a), veh/h	227	1425	498	893	2378	809	136	462	363	491	852	380
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.21	0.21	0.21	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.5	27.5	24.3	51.0	7.4	7.1	85.9	72.3	77.5	76.5	59.0	59.2
Incr Delay (d2), s/veh	15.5	1.9	1.1	8.0	0.2	0.3	13.5	0.7	29.9	27.6	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.5	2.6	17.5	2.7	2.3	2.2	4.4	9.2	12.5	8.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.1	29.4	25.4	58.9	7.5	7.5	99.4	72.9	107.4	104.1	59.5	60.2
LnGrp LOS	F	C	C	E	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1255			2343			627			1078	
Approach Delay, s/veh		37.5			26.3			95.1			78.8	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	98.9	13.3	49.7	53.4	63.6	33.0	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	10.5	13.4	6.4	20.8	45.5	26.1	26.0	23.5
Green Ext Time (p_c), s	0.1	30.9	0.0	3.2	0.4	14.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	129	491	338	67	102	214
Future Vol, veh/h	129	491	338	67	102	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	143	546	376	74	113	238

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	450	0	-	0	1208	376
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	832	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1121	-	-	-	202	670
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1121	-	-	-	176	670
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	605	-
Stage 2	-	-	-	-	427	-

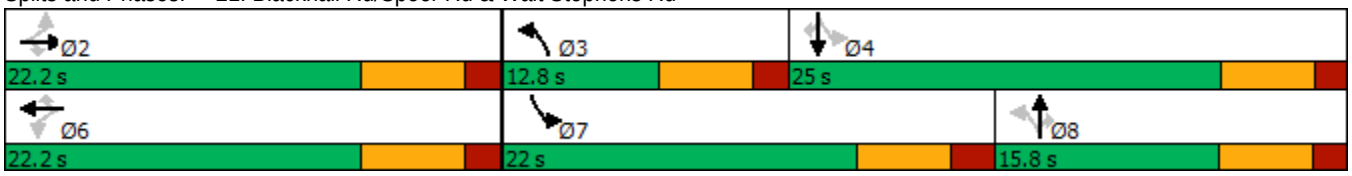
Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	27.2
HCM LOS			D

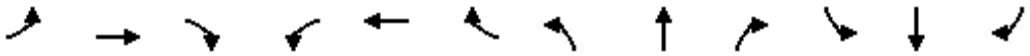
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1121	-	-	-	176	670
HCM Lane V/C Ratio	0.128	-	-	-	0.644	0.355
HCM Control Delay (s)	8.7	-	-	-	56.5	13.3
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	3.7	1.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	479	88	126	343	316	48	195	107	734	475	21
Future Volume (vph)	33	479	88	126	343	316	48	195	107	734	475	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	17.0	10.0	10.0	31.6	24.4	24.4
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.28	0.17	0.17	0.53	0.41	0.41
v/c Ratio	0.17	0.97	0.14	1.02	0.69	0.33	0.13	0.64	0.22	1.11	0.63	0.03
Control Delay	19.7	59.7	0.5	115.7	28.9	3.6	9.7	34.3	1.0	86.2	22.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	59.7	0.5	115.7	28.9	3.6	9.7	34.3	1.0	86.2	22.1	0.0
LOS	B	E	A	F	C	A	A	C	A	F	C	A
Approach Delay		48.8			32.6			20.8			60.0	
Approach LOS		D			C			C			E	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 60		
Natural Cycle: 90		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.11		
Intersection Signal Delay: 45.9	Intersection LOS: D	
Intersection Capacity Utilization 108.7%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd



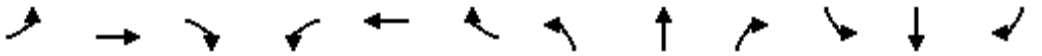


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	484	89	127	346	319	48	197	108	741	480	21
v/c Ratio	0.17	0.97	0.14	1.02	0.69	0.33	0.13	0.64	0.22	1.11	0.63	0.03
Control Delay	19.7	59.7	0.5	115.7	28.9	3.6	9.7	34.3	1.0	86.2	22.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	59.7	0.5	115.7	28.9	3.6	9.7	34.3	1.0	86.2	22.1	0.0
Queue Length 50th (ft)	9	173	0	~47	112	0	8	67	0	~232	156	0
Queue Length 95th (ft)	29	#342	0	#141	#215	27	20	#142	0	#427	#298	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	193	498	621	125	498	980	358	310	495	667	758	742
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.97	0.14	1.02	0.69	0.33	0.13	0.64	0.22	1.11	0.63	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	479	88	126	343	316	48	195	107	734	475	21
Future Volume (veh/h)	33	479	88	126	343	316	48	195	107	734	475	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	484	89	127	346	319	48	197	108	741	480	21
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	198	500	423	129	500	745	374	312	264	663	697	590
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.37	0.37
Sat Flow, veh/h	777	1885	1598	846	1885	2812	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	484	89	127	346	319	48	197	108	741	480	21
Grp Sat Flow(s),veh/h/ln	777	1885	1598	846	1885	1406	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.4	15.2	2.6	0.7	9.9	5.6	1.3	5.9	3.7	15.8	13.0	0.5
Cycle Q Clear(g_c), s	12.3	15.2	2.6	15.9	9.9	5.6	1.3	5.9	3.7	15.8	13.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	500	423	129	500	745	374	312	264	663	697	590
V/C Ratio(X)	0.17	0.97	0.21	0.98	0.69	0.43	0.13	0.63	0.41	1.12	0.69	0.04
Avail Cap(c_a), veh/h	198	500	423	129	500	745	468	312	264	663	697	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	21.8	17.2	30.0	19.8	18.3	18.2	23.3	22.4	15.7	15.9	12.0
Incr Delay (d2), s/veh	0.8	32.6	0.5	73.5	5.2	0.8	0.2	4.1	1.0	72.1	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	10.2	0.9	4.3	4.4	1.6	0.5	2.6	1.3	19.0	5.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	54.4	17.7	103.5	25.1	19.1	18.4	27.4	23.4	87.8	18.8	12.0
LnGrp LOS	C	D	B	F	C	B	B	C	C	F	B	B
Approach Vol, veh/h		606			792			353			1242	
Approach Delay, s/veh		47.5			35.3			24.9			59.8	
Approach LOS		D			D			C			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.7	28.1		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		17.2	3.3	15.0		17.9	17.8	7.9				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.0	0.0	0.3				

Intersection Summary												
HCM 6th Ctrl Delay			46.7									
HCM 6th LOS			D									

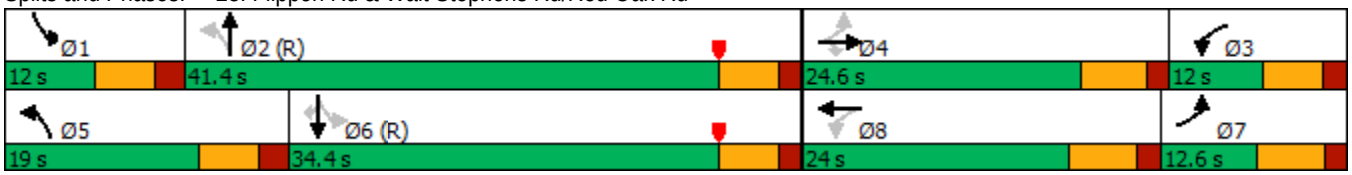
Notes

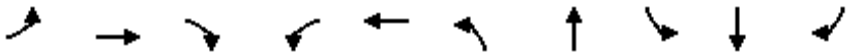
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	251	316	631	48	176	459	430	60	626	286
Future Volume (vph)	251	316	631	48	176	459	430	60	626	286
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	25.7	21.5	21.5	21.5	15.0	49.3	40.0	34.5	28.8	28.8
Actuated g/C Ratio	0.29	0.24	0.24	0.24	0.17	0.55	0.44	0.38	0.32	0.32
v/c Ratio	0.82	0.76	1.08	0.25	0.73	1.30	0.62	0.19	1.12	0.43
Control Delay	52.2	45.7	81.7	26.5	47.2	178.0	10.7	12.8	105.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	45.7	81.7	26.5	47.2	178.0	10.7	12.8	105.1	4.8
LOS	D	D	F	C	D	F	B	B	F	A
Approach Delay		66.0			43.3		93.4		69.8	
Approach LOS		E			D		F		E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 72.9	Intersection LOS: E
Intersection Capacity Utilization 103.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





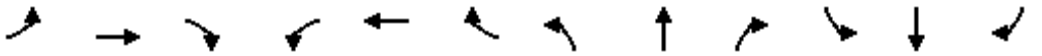
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	270	340	678	52	229	494	505	65	673	308
v/c Ratio	0.82	0.76	1.08	0.25	0.73	1.30	0.62	0.19	1.12	0.43
Control Delay	52.2	45.7	81.7	26.5	47.2	178.0	10.7	12.8	105.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	45.7	81.7	26.5	47.2	178.0	10.7	12.8	105.1	4.8
Queue Length 50th (ft)	118	189	~306	20	117	~320	158	17	~445	0
Queue Length 95th (ft)	#196	#340	#521	45	190	m#395	m145	37	#655	56
Internal Link Dist (ft)		6582			3175		1869		2577	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	329	449	625	208	373	380	821	347	601	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.76	1.08	0.25	0.61	1.30	0.62	0.19	1.12	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	316	631	48	176	37	459	430	40	60	626	286
Future Volume (veh/h)	251	316	631	48	176	37	459	430	40	60	626	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	270	340	0	52	189	40	494	462	43	65	673	308
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	282	377		167	226	48	337	733	68	376	648	549
Arrive On Green	0.10	0.20	0.00	0.05	0.15	0.15	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	1795	1885	1598	1795	1508	319	1781	1685	157	1795	1885	1598
Grp Volume(v), veh/h	270	340	0	52	0	229	494	0	505	65	673	308
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1828	1781	0	1842	1795	1885	1598
Q Serve(g_s), s	8.1	15.8	0.0	0.0	0.0	11.0	13.0	0.0	19.2	2.0	30.9	9.2
Cycle Q Clear(g_c), s	8.1	15.8	0.0	0.0	0.0	11.0	13.0	0.0	19.2	2.0	30.9	9.2
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	282	377		167	0	273	337	0	801	376	648	549
V/C Ratio(X)	0.96	0.90		0.31	0.00	0.84	1.46	0.00	0.63	0.17	1.04	0.56
Avail Cap(c_a), veh/h	282	390		204	0	364	337	0	801	399	648	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.00	1.00	0.00	1.00	0.19	0.00	0.19	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	35.1	0.0	40.7	0.0	37.2	26.5	0.0	19.8	17.7	29.5	10.2
Incr Delay (d2), s/veh	28.1	13.9	0.0	1.0	0.0	12.2	212.2	0.0	0.7	0.2	45.6	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.3	0.0	1.1	0.0	5.7	24.8	0.0	7.5	0.8	20.9	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	49.1	0.0	41.8	0.0	49.4	238.7	0.0	20.5	17.9	75.2	14.3
LnGrp LOS	E	D		D	A	D	F	A	C	B	F	B
Approach Vol, veh/h		610	A		281			999			1046	
Approach Delay, s/veh		56.9			48.0			128.4			53.7	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	44.7	10.5	24.0	19.0	36.5	14.9	19.6
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	4.0	21.2	2.0	17.8	15.0	32.9	10.1	13.0
Green Ext Time (p_c), s	0.0	4.6	0.0	0.1	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	79.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	677	11	2	969
Future Vol, veh/h	9	5	677	11	2	969
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	65	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	1	1
Mvmt Flow	10	6	752	12	2	1077

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1833	752	0	0	764	0
Stage 1	752	-	-	-	-	-
Stage 2	1081	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	84	410	-	-	853	-
Stage 1	466	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	83	410	-	-	853	-
Mov Cap-2 Maneuver	83	-	-	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	324	-	-	-	-	-

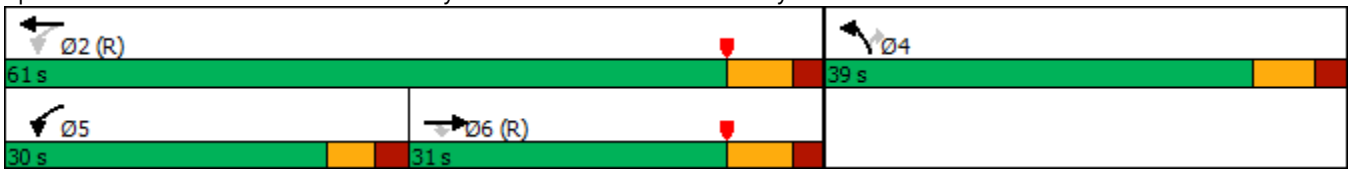
Approach	WB	NB	SB
HCM Control Delay, s	39.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	83	410	853	-
HCM Lane V/C Ratio	-	-	0.12	0.014	0.003	-
HCM Control Delay (s)	-	-	54.2	13.9	9.2	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	623	414	463	1051	519	328
Future Volume (vph)	623	414	463	1051	519	328
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	23.7	23.7	54.9	53.7	31.9	31.9
Actuated g/C Ratio	0.24	0.24	0.55	0.54	0.32	0.32
v/c Ratio	0.98	0.69	1.13	0.70	1.23	0.55
Control Delay	69.3	9.5	109.6	20.0	151.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	9.5	109.6	20.0	151.7	6.3
LOS	E	A	F	B	F	A
Approach Delay	45.4			47.4	95.4	
Approach LOS	D			D	F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 58.7	Intersection LOS: E
Intersection Capacity Utilization 88.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138



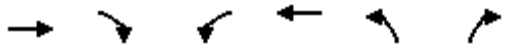


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	677	450	503	1142	564	357
v/c Ratio	0.98	0.69	1.13	0.70	1.23	0.55
Control Delay	69.3	9.5	109.6	20.0	151.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	9.5	109.6	20.0	151.7	6.3
Queue Length 50th (ft)	226	0	~319	268	~445	0
Queue Length 95th (ft)	#348	94	#522	345	#651	68
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	689	651	445	1642	460	655
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.69	1.13	0.70	1.23	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	623	414	463	1051	519	328
Future Volume (veh/h)	623	414	463	1051	519	328
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	677	450	503	1142	564	357
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	695	310	447	1666	465	413
Arrive On Green	0.24	0.24	0.24	0.54	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	677	450	503	1142	564	357
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	22.9	23.7	23.9	27.0	31.9	25.9
Cycle Q Clear(g_c), s	22.9	23.7	23.9	27.0	31.9	25.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	695	310	447	1666	465	413
V/C Ratio(X)	0.97	1.45	1.12	0.69	1.21	0.86
Avail Cap(c_a), veh/h	695	310	447	1666	465	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	38.2	27.5	17.0	34.0	32.0
Incr Delay (d2), s/veh	28.2	220.1	81.1	2.3	114.6	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	25.9	16.6	8.9	25.0	18.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.1	258.2	108.6	19.3	148.7	49.4
LnGrp LOS	E	F	F	B	F	D
Approach Vol, veh/h	1127			1645	921	
Approach Delay, s/veh	142.8			46.6	110.2	
Approach LOS	F			D	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.0		39.0	30.0	31.0
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		29.0		33.9	25.9	25.7
Green Ext Time (p_c), s		14.6		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.8
HCM 6th LOS	F

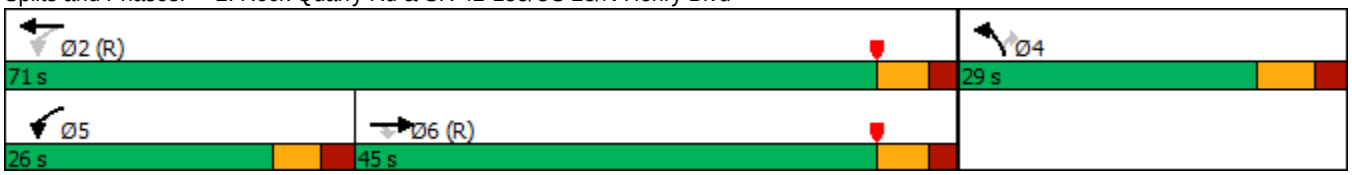
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	863	223	483	1386	174	414
Future Volume (vph)	863	223	483	1386	174	414
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	36.8	36.8	66.7	66.6	20.4	20.4
Actuated g/C Ratio	0.37	0.37	0.67	0.67	0.20	0.20
v/c Ratio	0.84	0.32	0.94	0.75	0.51	0.68
Control Delay	28.0	5.5	51.3	14.5	40.7	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	5.5	51.3	14.5	40.7	11.0
LOS	C	A	D	B	D	B
Approach Delay	23.4			24.0	19.8	
Approach LOS	C			C	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 23.1	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	908	235	508	1459	183	436
v/c Ratio	0.84	0.32	0.94	0.75	0.51	0.68
Control Delay	28.0	5.5	51.3	14.5	40.7	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	5.5	51.3	14.5	40.7	11.0
Queue Length 50th (ft)	143	1	235	288	105	18
Queue Length 95th (ft)	281	67	#476	406	170	112
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1141	759	538	1938	391	663
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.31	0.94	0.75	0.47	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	863	223	483	1386	174	414
Future Volume (veh/h)	863	223	483	1386	174	414
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	908	235	508	1459	183	436
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1152	617	473	1904	394	350
Arrive On Green	0.13	0.13	0.20	0.65	0.22	0.22
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	908	235	508	1459	183	436
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	29.7	13.6	20.0	34.7	8.9	22.1
Cycle Q Clear(g_c), s	29.7	13.6	20.0	34.7	8.9	22.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1152	617	473	1904	394	350
V/C Ratio(X)	0.79	0.38	1.07	0.77	0.46	1.24
Avail Cap(c_a), veh/h	1152	617	473	1904	394	350
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	32.5	27.4	12.3	33.8	39.0
Incr Delay (d2), s/veh	5.1	1.7	62.3	3.0	1.2	131.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	6.0	13.1	9.8	3.9	30.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.7	34.2	89.7	15.3	35.0	170.9
LnGrp LOS	D	C	F	B	D	F
Approach Vol, veh/h	1143			1967	619	
Approach Delay, s/veh	42.5			34.5	130.7	
Approach LOS	D			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.0		29.0	26.0	45.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s		36.7		24.1	22.0	31.7
Green Ext Time (p_c), s		22.9		0.0	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1081	9	1566	10	2
Future Volume (vph)	1081	9	1566	10	2
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	87.0	87.0	87.0	13.0	13.0
Total Split (%)	87.0%	87.0%	87.0%	13.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	96.1	96.1	96.1	6.2	6.2
Actuated g/C Ratio	0.96	0.96	0.96	0.06	0.06
v/c Ratio	0.39	0.02	0.57	0.09	0.02
Control Delay	2.5	0.6	2.4	45.7	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	0.6	2.4	45.7	31.5
LOS	A	A	A	D	C
Approach Delay	2.5		2.4	43.3	
Approach LOS	A		A	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 2.6	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd

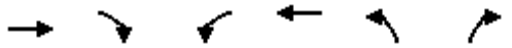




Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1112	9	1598	10	2
v/c Ratio	0.39	0.02	0.57	0.09	0.02
Control Delay	2.5	0.6	2.4	45.7	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	0.6	2.4	45.7	31.5
Queue Length 50th (ft)	0	0	0	6	0
Queue Length 95th (ft)	m245	m1	404	23	7
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2822	456	2821	124	113
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.02	0.57	0.08	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1081	9	9	1566	10	2
Future Volume (veh/h)	1081	9	9	1566	10	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	1103	9	9	1598	10	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2595	21	509	2553	25	22
Arrive On Green	1.00	1.00	1.00	1.00	0.01	0.01
Sat Flow, veh/h	3089	25	507	3040	1781	1585
Grp Volume(v), veh/h	543	569	9	1598	10	2
Grp Sat Flow(s),veh/h/ln	1481	1555	507	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.6	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.6	0.1
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1277	1340	509	2553	25	22
V/C Ratio(X)	0.42	0.43	0.02	0.63	0.40	0.09
Avail Cap(c_a), veh/h	1277	1340	509	2553	125	111
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.62	0.62	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	48.9	48.7
Incr Delay (d2), s/veh	0.9	0.8	0.0	0.7	9.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.3	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.8	0.0	0.7	58.6	50.3
LnGrp LOS	A	A	A	A	E	D
Approach Vol, veh/h	1112			1607	12	
Approach Delay, s/veh	0.8			0.7	57.2	
Approach LOS	A			A	E	

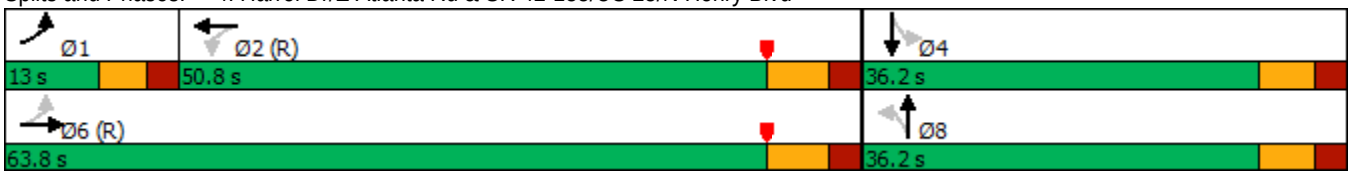
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		92.6		7.4		92.6
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		80.6		7.0		80.6
Max Q Clear Time (g_c+I1), s		2.0		2.6		2.0
Green Ext Time (p_c), s		47.4		0.0		23.6

Intersection Summary	
HCM 6th Ctrl Delay	1.0
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	245	799	18	1365	71	33	279	6
Future Volume (vph)	245	799	18	1365	71	33	279	6
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	13.0	63.8	50.8	50.8	36.2	36.2	36.2	36.2
Total Split (%)	13.0%	63.8%	50.8%	50.8%	36.2%	36.2%	36.2%	36.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	57.8	56.7	43.7	43.7		29.5		29.5
Actuated g/C Ratio	0.58	0.57	0.44	0.44		0.30		0.30
v/c Ratio	1.47	0.54	0.08	1.28		0.43		1.47
Control Delay	249.6	8.6	23.5	159.5		27.6		253.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	249.6	8.6	23.5	159.5		27.6		253.4
LOS	F	A	C	F		C		F
Approach Delay		61.2		158.0		27.6		253.4
Approach LOS		E		F		C		F

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 134.2	Intersection LOS: F
Intersection Capacity Utilization 110.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





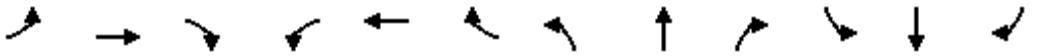
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	255	913	19	1638	167	535
v/c Ratio	1.47	0.54	0.08	1.28	0.43	1.47
Control Delay	249.6	8.6	23.5	159.5	27.6	253.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	249.6	8.6	23.5	159.5	27.6	253.4
Queue Length 50th (ft)	~174	194	7	~685	71	~456
Queue Length 95th (ft)	m#272	189	m18	#828	134	#662
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	174	1687	253	1276	387	364
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.47	0.54	0.08	1.28	0.43	1.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	799	78	18	1365	207	71	33	57	279	6	228
Future Volume (veh/h)	245	799	78	18	1365	207	71	33	57	279	6	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	255	832	81	19	1422	216	74	34	59	291	6	238
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	182	1561	152	304	1129	169	215	104	146	279	5	183
Arrive On Green	0.07	0.57	0.57	0.14	0.14	0.14	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1570	2753	268	611	2583	388	554	351	494	759	16	620
Grp Volume(v), veh/h	255	452	461	19	808	830	167	0	0	535	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1526	611	1481	1489	1399	0	0	1395	0	0
Q Serve(g_s), s	7.0	18.8	18.8	2.7	43.7	43.7	0.0	0.0	0.0	20.5	0.0	0.0
Cycle Q Clear(g_c), s	7.0	18.8	18.8	8.5	43.7	43.7	9.0	0.0	0.0	29.5	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.26	0.44		0.35	0.54		0.44
Lane Grp Cap(c), veh/h	182	848	865	304	647	651	465	0	0	467	0	0
V/C Ratio(X)	1.40	0.53	0.53	0.06	1.25	1.28	0.36	0.00	0.00	1.15	0.00	0.00
Avail Cap(c_a), veh/h	182	848	865	304	647	651	465	0	0	467	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.80	0.80	0.80	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	13.4	13.4	30.3	42.8	42.8	27.8	0.0	0.0	37.2	0.0	0.0
Incr Delay (d2), s/veh	197.7	1.3	1.3	0.3	122.0	133.3	0.5	0.0	0.0	88.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	6.1	6.2	0.5	39.1	41.4	3.2	0.0	0.0	22.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	224.1	14.7	14.7	30.6	164.8	176.1	28.3	0.0	0.0	125.2	0.0	0.0
LnGrp LOS	F	B	B	C	F	F	C	A	A	F	A	A
Approach Vol, veh/h		1168			1657			167			535	
Approach Delay, s/veh		60.4			168.9			28.3			125.2	
Approach LOS		E			F			C			F	

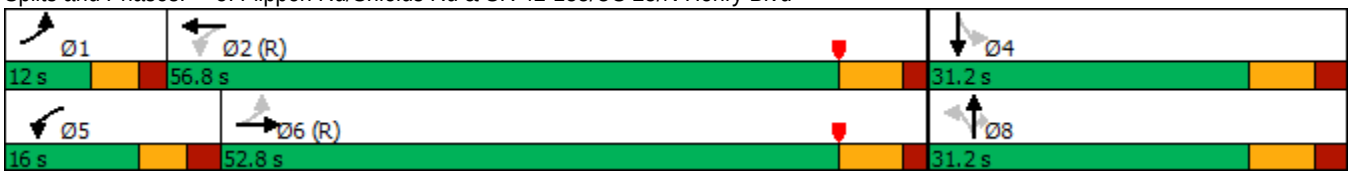
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.0	50.8		36.2		63.8		36.2				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	7.0	43.7		29.5		56.7		29.5				
Max Q Clear Time (g_c+I1), s	9.0	45.7		31.5		20.8		11.0				
Green Ext Time (p_c), s	0.0	0.0		0.0		13.8		1.0				

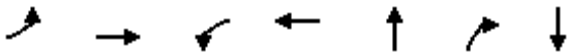
Intersection Summary			
HCM 6th Ctrl Delay		119.7	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	5	883	277	1574	316	16	269	27	46
Future Volume (vph)	5	883	277	1574	316	16	269	27	46
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	53.2	46.1	62.5	59.8		23.8	23.8		23.8
Actuated g/C Ratio	0.53	0.46	0.62	0.60		0.24	0.24		0.24
v/c Ratio	0.03	0.82	0.95	0.94		1.10	0.62		0.37
Control Delay	7.6	29.3	32.5	14.5		117.7	28.4		32.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	7.6	29.3	32.5	14.5		117.7	28.4		32.2
LOS	A	C	C	B		F	C		C
Approach Delay		29.2		17.2		77.8			32.2
Approach LOS		C		B		E			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 90.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





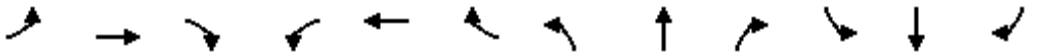
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	5	1082	292	1664	350	283	97
v/c Ratio	0.03	0.82	0.95	0.94	1.10	0.62	0.37
Control Delay	7.6	29.3	32.5	14.5	117.7	28.4	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	29.3	32.5	14.5	117.7	28.4	32.2
Queue Length 50th (ft)	1	298	74	554	~254	103	45
Queue Length 95th (ft)	5	392	m54	m459	#430	193	94
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	189	1316	308	1767	318	453	263
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.82	0.95	0.94	1.10	0.62	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	883	145	277	1574	7	316	16	269	27	46	20
Future Volume (veh/h)	5	883	145	277	1574	7	316	16	269	27	46	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	929	153	292	1657	7	333	17	283	28	48	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	95	1151	190	320	1702	7	212	7	377	46	68	19
Arrive On Green	0.01	0.46	0.46	0.10	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2497	411	1753	3054	13	594	30	1585	0	287	79
Grp Volume(v), veh/h	5	540	542	292	811	853	350	0	283	97	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1455	1753	1495	1572	624	0	1585	366	0	0
Q Serve(g_s), s	0.1	31.9	31.9	8.4	52.5	52.6	0.0	0.0	16.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	31.9	31.9	8.4	52.5	52.6	23.8	0.0	16.6	23.8	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.01	0.95		1.00	0.29		0.22
Lane Grp Cap(c), veh/h	95	670	671	320	833	876	219	0	377	134	0	0
V/C Ratio(X)	0.05	0.81	0.81	0.91	0.97	0.97	1.60	0.00	0.75	0.73	0.00	0.00
Avail Cap(c_a), veh/h	195	670	671	320	833	876	219	0	377	134	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.5	23.1	23.1	20.3	21.4	21.4	41.9	0.0	35.3	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	10.1	10.1	4.1	5.0	4.9	290.4	0.0	9.7	21.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.7	11.7	3.4	17.4	18.3	23.0	0.0	7.2	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	33.2	33.2	24.5	26.4	26.3	332.3	0.0	45.0	54.0	0.0	0.0
LnGrp LOS	C	C	C	C	C	C	F	A	D	D	A	A
Approach Vol, veh/h		1087			1956			633			97	
Approach Delay, s/veh		33.1			26.1			203.9			54.0	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	62.4		31.2	16.0	52.8		31.2				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	54.6		25.8	10.4	33.9		25.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		58.7	
HCM 6th LOS		E	

Intersection	
Int Delay, s/veh	62.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	3	119	12	3	16	195	1617	25	9	776	59
Future Vol, veh/h	30	3	119	12	3	16	195	1617	25	9	776	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	32	3	125	13	3	17	205	1702	26	9	817	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2129	3004	440	2540	3009	851	879	0	0	1728	0	0
Stage 1	866	866	-	2112	2112	-	-	-	-	-	-	-
Stage 2	1263	2138	-	428	897	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 28	13	565	14	13	303	764	-	-	361	-	-
Stage 1	314	369	-	52	90	-	-	-	-	-	-	-
Stage 2	180	88	-	575	357	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 15	9	565	~ 6	9	303	764	-	-	361	-	-
Mov Cap-2 Maneuver	~ 15	9	-	~ 6	9	-	-	-	-	-	-	-
Stage 1	230	360	-	38	66	-	-	-	-	-	-	-
Stage 2	118	64	-	433	348	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 901.1	$ 1276.1	1.2	0.2
HCM LOS	F	F		

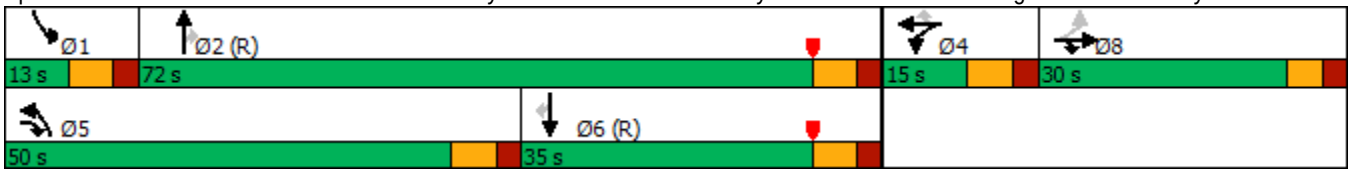
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	764	-	-	60	13	361	-	-
HCM Lane V/C Ratio	0.269	-	-	2.667	2.51	0.026	-	-
HCM Control Delay (s)	11.4	-	-	$ 901.1	$ 1276.1	15.2	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	1.1	-	-	16.2	4.9	0.1	-	-

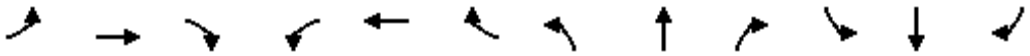
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	78	487	41	62	51	933	642	45	25	324	227
Future Volume (vph)	134	78	487	41	62	51	933	642	45	25	324	227
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	30.0	30.0		15.0	15.0	15.0	50.0	72.0	72.0	13.0	35.0	35.0
Total Split (%)	23.1%	23.1%		11.5%	11.5%	11.5%	38.5%	55.4%	55.4%	10.0%	26.9%	26.9%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	21.3	21.3	73.6	9.0	9.0	9.0	45.5	74.5	74.5	7.6	30.5	30.5
Actuated g/C Ratio	0.16	0.16	0.57	0.07	0.07	0.07	0.35	0.57	0.57	0.06	0.23	0.23
v/c Ratio	0.74	0.27	0.37	0.36	0.51	0.18	0.93	0.40	0.05	0.25	0.49	0.47
Control Delay	54.1	29.1	14.5	66.3	72.6	1.4	56.3	18.9	0.1	65.7	47.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	29.1	14.5	66.3	72.6	1.4	56.3	18.9	0.1	65.7	47.5	8.5
LOS	D	C	B	E	E	A	E	B	A	E	D	A
Approach Delay		23.7			47.5			39.9			33.0	
Approach LOS		C			D			D			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 35.3	Intersection LOS: D
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy

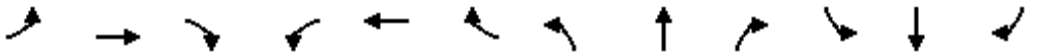




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	140	81	507	43	65	53	972	669	47	26	338	236
v/c Ratio	0.74	0.27	0.37	0.36	0.51	0.18	0.93	0.40	0.05	0.25	0.49	0.47
Control Delay	54.1	29.1	14.5	66.3	72.6	1.4	56.3	18.9	0.1	65.7	47.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	29.1	14.5	66.3	72.6	1.4	56.3	18.9	0.1	65.7	47.5	8.5
Queue Length 50th (ft)	115	50	171	35	53	0	402	201	0	21	140	0
Queue Length 95th (ft)	#169	74	291	76	#113	0	#560	240	0	54	184	71
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	214	343	1353	121	128	293	1047	1680	980	102	725	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.24	0.37	0.36	0.51	0.18	0.93	0.40	0.05	0.25	0.47	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	78	487	41	62	51	933	642	45	25	324	227
Future Volume (veh/h)	134	78	487	41	62	51	933	642	45	25	324	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	140	81	507	43	65	53	972	669	47	26	338	236
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	246	293	1199	109	115	97	1008	1591	868	50	728	343
Arrive On Green	0.05	0.05	0.05	0.06	0.06	0.06	0.33	0.55	0.55	0.03	0.25	0.25
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	140	81	507	43	65	53	972	669	47	26	338	236
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	11.3	5.4	16.6	3.0	4.4	4.2	40.8	17.6	1.8	1.9	12.6	19.9
Cycle Q Clear(g_c), s	11.3	5.4	16.6	3.0	4.4	4.2	40.8	17.6	1.8	1.9	12.6	19.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	293	1199	109	115	97	1008	1591	868	50	728	343
V/C Ratio(X)	0.57	0.28	0.42	0.39	0.57	0.54	0.96	0.42	0.05	0.52	0.46	0.69
Avail Cap(c_a), veh/h	290	345	1267	110	115	98	1012	1591	868	84	728	343
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	54.5	24.0	58.7	59.3	59.2	42.7	17.3	13.7	62.3	41.8	44.5
Incr Delay (d2), s/veh	2.4	0.6	0.3	2.8	7.1	7.0	20.2	0.8	0.1	21.1	2.1	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	2.6	5.4	1.5	2.3	1.9	17.5	5.7	0.6	1.1	4.7	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	55.1	24.2	61.4	66.4	66.2	63.0	18.1	13.8	83.4	43.9	55.3
LnGrp LOS	E	E	C	E	E	E	E	B	B	F	D	E
Approach Vol, veh/h		728			161			1688			600	
Approach Delay, s/veh		34.5			65.0			43.8			50.1	
Approach LOS		C			E			D			D	

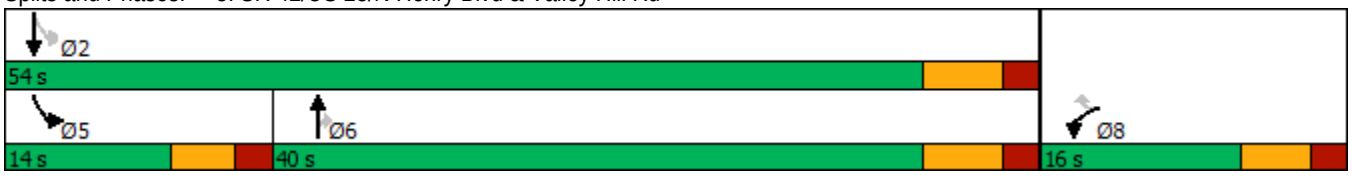
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	78.1		15.0	49.8	38.8		26.4				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	6.1	65.1		8.0	43.2	28.1		24.0				
Max Q Clear Time (g_c+I1), s	3.9	19.6		6.4	42.8	21.9		18.6				
Green Ext Time (p_c), s	0.0	10.5		0.1	0.2	2.5		1.8				

Intersection Summary			
HCM 6th Ctrl Delay		43.9	
HCM 6th LOS		D	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	149	268	760	69	144	388
Future Volume (vph)	149	268	760	69	144	388
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	40.0	40.0	14.0	54.0
Total Split (%)	22.9%	22.9%	57.1%	57.1%	20.0%	77.1%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.7	10.7	23.8	23.8	34.9	34.1
Actuated g/C Ratio	0.19	0.19	0.42	0.42	0.61	0.60
v/c Ratio	0.47	0.54	0.66	0.10	0.32	0.23
Control Delay	30.6	8.3	16.7	3.4	5.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	8.3	16.7	3.4	5.8	5.1
LOS	C	A	B	A	A	A
Approach Delay	16.3		15.6			5.3
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 57.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 51.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	157	282	800	73	152	408
v/c Ratio	0.47	0.54	0.66	0.10	0.32	0.23
Control Delay	30.6	8.3	16.7	3.4	5.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	8.3	16.7	3.4	5.8	5.1
Queue Length 50th (ft)	52	0	121	0	18	27
Queue Length 95th (ft)	#132	62	173	19	34	43
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	338	530	1824	1011	476	2402
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.53	0.44	0.07	0.32	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	149	268	760	69	144	388
Future Volume (veh/h)	149	268	760	69	144	388
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	157	0	800	73	152	408
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	285		1223	654	476	1879
Arrive On Green	0.16	0.00	0.41	0.41	0.13	0.63
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	157	0	800	73	152	408
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	4.7	0.0	12.5	1.6	2.3	3.4
Cycle Q Clear(g_c), s	4.7	0.0	12.5	1.6	2.3	3.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	285		1223	654	476	1879
V/C Ratio(X)	0.55		0.65	0.11	0.32	0.22
Avail Cap(c_a), veh/h	323		1746	934	517	2469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	13.5	10.4	8.1	4.5
Incr Delay (d2), s/veh	1.7	0.0	1.3	0.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	3.4	0.5	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	0.0	14.8	10.5	8.4	4.6
LnGrp LOS	C		B	B	A	A
Approach Vol, veh/h	157	A	873			560
Approach Delay, s/veh	23.8		14.5			5.6
Approach LOS	C		B			A

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		42.6			12.7	29.9	14.8
Change Period (Y+Rc), s		6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s		47.8			8.6	33.8	10.4
Max Q Clear Time (g_c+I1), s		5.4			4.3	14.5	6.7
Green Ext Time (p_c), s		5.4			0.1	9.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

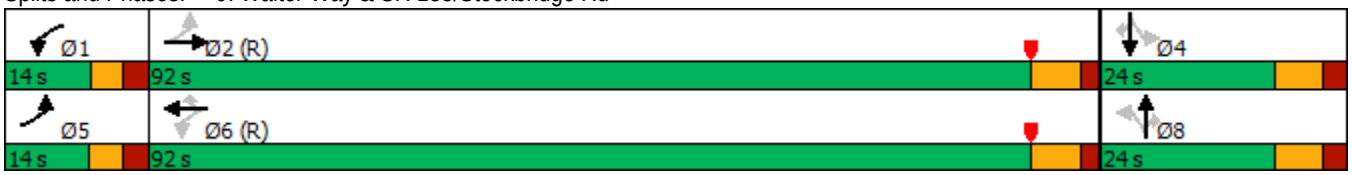
Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	737	53	1228	4	51	1	42	1	1	5
Future Volume (vph)	2	737	53	1228	4	51	1	42	1	1	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	14.0	92.0	14.0	92.0	92.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	70.8%	10.8%	70.8%	70.8%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	104.1	99.7	108.3	107.1	107.1		11.0	11.0		11.0	11.0
Actuated g/C Ratio	0.80	0.77	0.83	0.82	0.82		0.08	0.08		0.08	0.08
v/c Ratio	0.01	0.35	0.10	0.51	0.00		0.48	0.21		0.02	0.02
Control Delay	1.5	3.6	1.4	6.9	0.0		69.9	4.1		52.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	1.5	3.6	1.4	6.9	0.0		69.9	4.1		52.5	0.2
LOS	A	A	A	A	A		E	A		D	A
Approach Delay		3.6		6.7			40.7			15.1	
Approach LOS		A		A			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 36 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd

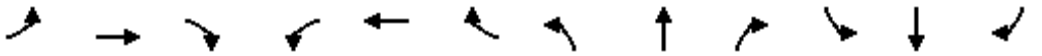




Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2	825	56	1293	4	55	44	2	5
v/c Ratio	0.01	0.35	0.10	0.51	0.00	0.48	0.21	0.02	0.02
Control Delay	1.5	3.6	1.4	6.9	0.0	69.9	4.1	52.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.5	3.6	1.4	6.9	0.0	69.9	4.1	52.5	0.2
Queue Length 50th (ft)	0	71	3	54	0	45	0	2	0
Queue Length 95th (ft)	m0	25	m3	m594	m0	88	8	10	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	387	2365	563	2541	1318	176	276	203	276
Starvation Cap Reductn	0	283	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	13	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.10	0.51	0.00	0.31	0.16	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	737	47	53	1228	4	51	1	42	1	1	5
Future Volume (veh/h)	2	737	47	53	1228	4	51	1	42	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	776	49	56	1293	4	54	1	44	1	1	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	350	2031	128	578	2240	1134	55	1	206	42	29	206
Arrive On Green	0.01	1.00	1.00	0.08	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	2991	189	1781	3131	1585	0	4	1585	0	221	1585
Grp Volume(v), veh/h	2	406	419	56	1293	4	55	0	44	2	0	5
Grp Sat Flow(s),veh/h/ln	1781	1566	1614	1781	1566	1585	4	0	1585	221	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.1	0.0	0.0	16.9	0.0	3.2	16.9	0.0	0.4
Prop In Lane	1.00		0.12	1.00		1.00	0.98		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	350	1063	1096	578	2240	1134	55	0	206	70	0	206
V/C Ratio(X)	0.01	0.38	0.38	0.10	0.58	0.00	0.99	0.00	0.21	0.03	0.00	0.02
Avail Cap(c_a), veh/h	456	1063	1096	620	2240	1134	55	0	206	70	0	206
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.46	0.46	0.46	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.5	0.0	0.0	4.8	0.0	0.0	64.8	0.0	50.6	50.1	0.0	49.4
Incr Delay (d2), s/veh	0.0	1.0	0.9	0.0	0.5	0.0	118.1	0.0	0.5	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.4	0.2	0.0	3.6	0.0	1.3	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	1.0	0.9	4.8	0.5	0.0	182.9	0.0	51.1	50.3	0.0	49.4
LnGrp LOS	A	A	A	A	A	A	F	A	D	D	A	D
Approach Vol, veh/h		827			1353			99			7	
Approach Delay, s/veh		1.0			0.7			124.3			49.6	
Approach LOS		A			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	95.1		24.0	6.2	99.8		24.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 8.3	* 85		16.9	* 8.2	* 85		16.9				
Max Q Clear Time (g_c+I1), s	3.1	2.0		18.9	2.0	2.0		18.9				
Green Ext Time (p_c), s	0.0	13.1		0.0	0.0	31.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

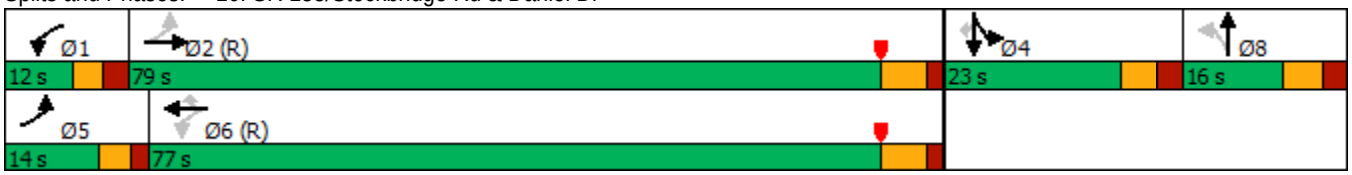
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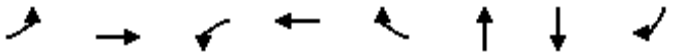
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	107	767	11	1255	37	14	4	7	168
Future Volume (vph)	107	767	11	1255	37	14	4	7	168
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	14.0	79.0	12.0	77.0	77.0	16.0	16.0	23.0	23.0
Total Split (%)	10.8%	60.8%	9.2%	59.2%	59.2%	12.3%	12.3%	17.7%	17.7%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	99.3	94.3	93.0	86.2	86.2		8.5	9.7	9.7
Actuated g/C Ratio	0.76	0.73	0.72	0.66	0.66		0.07	0.07	0.07
v/c Ratio	0.37	0.39	0.02	0.63	0.03		0.24	0.37	0.62
Control Delay	15.8	3.2	1.8	6.2	0.1		52.9	64.4	18.2
Queue Delay	0.0	0.1	0.0	0.8	0.0		0.0	0.0	0.3
Total Delay	15.8	3.3	1.8	7.0	0.1		52.9	64.4	18.5
LOS	B	A	A	A	A		D	E	B
Approach Delay		4.7		6.8			52.9	28.6	
Approach LOS		A		A			D	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 67.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr

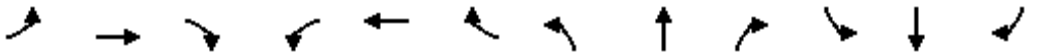




Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	110	821	11	1294	38	24	49	173
v/c Ratio	0.37	0.39	0.02	0.63	0.03	0.24	0.37	0.62
Control Delay	15.8	3.2	1.8	6.2	0.1	52.9	64.4	18.2
Queue Delay	0.0	0.1	0.0	0.8	0.0	0.0	0.0	0.3
Total Delay	15.8	3.3	1.8	7.0	0.1	52.9	64.4	18.5
Queue Length 50th (ft)	25	41	1	108	0	15	40	0
Queue Length 95th (ft)	m49	m41	m1	53	m0	44	81	69
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	318	2083	504	2045	1091	112	233	357
Starvation Cap Reductn	0	265	0	33	0	0	0	0
Spillback Cap Reductn	0	0	0	418	0	0	0	23
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.45	0.02	0.80	0.03	0.21	0.21	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	767	29	11	1255	37	14	4	6	41	7	168
Future Volume (veh/h)	107	767	29	11	1255	37	14	4	6	41	7	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	791	30	11	1294	38	14	4	6	42	7	173
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	389	1811	69	492	1923	973	36	10	16	190	32	195
Arrive On Green	0.09	1.00	1.00	0.03	1.00	1.00	0.04	0.04	0.04	0.12	0.12	0.12
Sat Flow, veh/h	1781	2827	107	1781	3131	1585	1016	290	435	1537	256	1585
Grp Volume(v), veh/h	110	403	418	11	1294	38	24	0	0	49	0	173
Grp Sat Flow(s),veh/h/ln	1781	1439	1495	1781	1566	1585	1741	0	0	1793	0	1585
Q Serve(g_s), s	2.9	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	3.2	0.0	14.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	3.2	0.0	14.0
Prop In Lane	1.00		0.07	1.00		1.00	0.58		0.25	0.86		1.00
Lane Grp Cap(c), veh/h	389	922	958	492	1923	973	62	0	0	221	0	195
V/C Ratio(X)	0.28	0.44	0.44	0.02	0.67	0.04	0.39	0.00	0.00	0.22	0.00	0.88
Avail Cap(c_a), veh/h	431	922	958	554	1923	973	130	0	0	235	0	207
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.85	0.85	0.85	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	0.0	8.8	0.0	0.0	61.3	0.0	0.0	51.4	0.0	56.1
Incr Delay (d2), s/veh	0.3	1.2	1.1	0.0	1.6	0.1	3.9	0.0	0.0	0.5	0.0	32.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.3	0.3	0.1	0.4	0.0	0.8	0.0	0.0	1.5	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	1.2	1.1	8.9	1.6	0.1	65.2	0.0	0.0	51.9	0.0	88.4
LnGrp LOS	A	A	A	A	A	A	E	A	A	D	A	F
Approach Vol, veh/h		931			1343			24			222	
Approach Delay, s/veh		1.9			1.6			65.2			80.3	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	89.6		22.0	10.9	86.1		10.9				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 73		17.0	9.0	* 71		9.7				
Max Q Clear Time (g_c+I1), s	2.3	2.0		16.0	4.9	2.0		3.8				
Green Ext Time (p_c), s	0.0	13.0		0.1	0.1	29.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		9.3	
HCM 6th LOS		A	

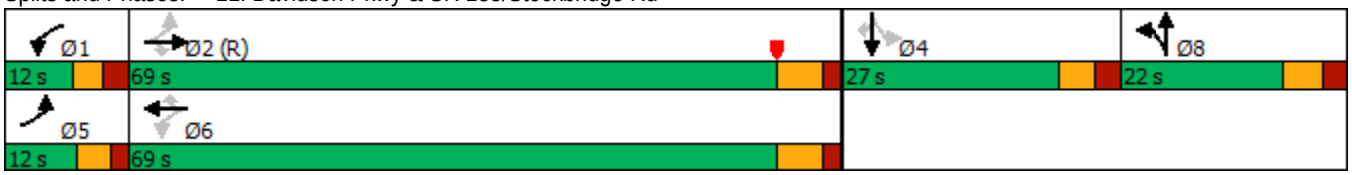
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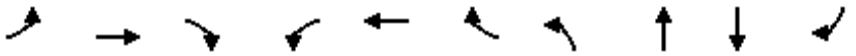
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	844	918	25	1324	53	697	11	20	12	95
Future Volume (vph)	76	844	918	25	1324	53	697	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	22.0	22.0	27.0	27.0	27.0
Total Split (%)	9.2%	53.1%	53.1%	9.2%	53.1%	53.1%	16.9%	16.9%	20.8%	20.8%	20.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	73.0	67.5	67.5	69.9	62.9	62.9	20.5	20.5		16.2	16.2
Actuated g/C Ratio	0.56	0.52	0.52	0.54	0.48	0.48	0.16	0.16		0.12	0.12
v/c Ratio	0.51	0.60	0.79	0.08	1.01	0.07	1.47	1.44		0.74	0.32
Control Delay	22.3	28.0	10.3	5.0	56.5	0.3	267.7	256.7		123.8	6.6
Queue Delay	0.0	0.5	1.4	0.0	35.5	0.0	0.0	0.0		0.0	0.1
Total Delay	22.3	28.6	11.7	5.0	92.0	0.3	267.7	256.7		123.8	6.7
LOS	C	C	B	A	F	A	F	F		F	A
Approach Delay		19.9			87.0			262.3		36.4	
Approach LOS		B			F			F		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 86.7	Intersection LOS: F
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





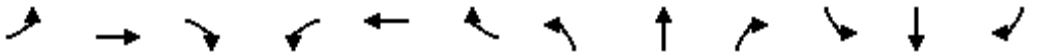
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	888	966	26	1394	56	389	383	34	100
v/c Ratio	0.51	0.60	0.79	0.08	1.01	0.07	1.47	1.44	0.74	0.32
Control Delay	22.3	28.0	10.3	5.0	56.5	0.3	267.7	256.7	123.8	6.6
Queue Delay	0.0	0.5	1.4	0.0	35.5	0.0	0.0	0.0	0.0	0.1
Total Delay	22.3	28.6	11.7	5.0	92.0	0.3	267.7	256.7	123.8	6.7
Queue Length 50th (ft)	30	370	371	6	~665	0	~496	~486	28	0
Queue Length 95th (ft)	m37	m394	m427	m4	#775	m0	#742	#734	#80	30
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	159	1488	1226	316	1385	829	265	266	60	362
Starvation Cap Reductn	0	238	110	0	116	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	380	0	0	0	0	16
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.71	0.87	0.08	1.39	0.07	1.47	1.44	0.57	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	844	918	25	1324	53	697	11	25	20	12	95
Future Volume (veh/h)	76	844	918	25	1324	53	697	11	25	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	888	0	26	1394	56	767	0	0	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	344	1689		465	1656	912	430	226	0	88	55	125
Arrive On Green	0.07	0.98	0.00	0.06	1.00	1.00	0.12	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1121	694	1585
Grp Volume(v), veh/h	80	888	0	26	1394	56	767	0	0	34	0	100
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1814	0	1585
Q Serve(g_s), s	2.3	1.6	0.0	0.8	0.0	0.0	15.7	0.0	0.0	2.3	0.0	8.1
Cycle Q Clear(g_c), s	2.3	1.6	0.0	0.8	0.0	0.0	15.7	0.0	0.0	2.3	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.62		1.00
Lane Grp Cap(c), veh/h	344	1689		465	1656	912	430	226	0	143	0	125
V/C Ratio(X)	0.23	0.53		0.06	0.84	0.06	1.78	0.00	0.00	0.24	0.00	0.80
Avail Cap(c_a), veh/h	363	1689		504	1656	912	430	226	0	293	0	256
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.00	0.73	0.73	0.73	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	0.5	0.0	10.1	0.0	0.0	57.2	0.0	0.0	56.2	0.0	58.9
Incr Delay (d2), s/veh	0.1	0.5	0.0	0.0	3.4	0.0	361.5	0.0	0.0	0.8	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.0	0.3	0.8	0.0	28.7	0.0	0.0	1.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	1.0	0.0	10.1	3.4	0.0	418.6	0.0	0.0	57.1	0.0	70.0
LnGrp LOS	A	A		B	A	A	F	A	A	E	A	E
Approach Vol, veh/h		968	A		1476			767			134	
Approach Delay, s/veh		1.7			3.3			418.6			66.7	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	82.6		16.2	10.7	81.1		22.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 63		21.0	7.0	* 63		15.7				
Max Q Clear Time (g_c+I1), s	2.8	3.6		10.1	4.3	2.0		17.7				
Green Ext Time (p_c), s	0.0	15.5		0.3	0.0	32.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		100.6
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

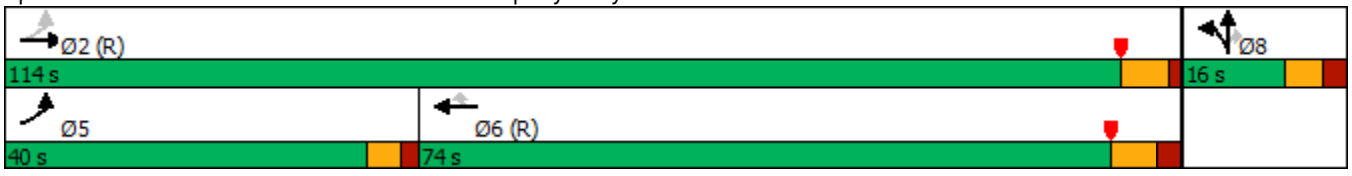
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	552	1561	1692	463	0	282
Future Volume (vph)	552	1561	1692	463	0	282
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	109.0	108.0	67.0	67.0	9.9	9.9
Actuated g/C Ratio	0.84	0.83	0.52	0.52	0.08	0.08
v/c Ratio	1.12	0.71	1.25	0.52	0.35	1.62
Control Delay	87.3	12.2	134.2	6.0	64.8	328.0
Queue Delay	0.0	1.0	0.2	1.3	4.0	0.2
Total Delay	87.3	13.1	134.4	7.3	68.8	328.2
LOS	F	B	F	A	E	F
Approach Delay		32.5	107.1		293.7	
Approach LOS		C	F		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.62	
Intersection Signal Delay: 86.0	Intersection LOS: F
Intersection Capacity Utilization 99.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





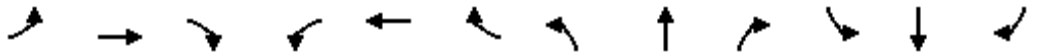
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	600	1697	1839	503	47	307
v/c Ratio	1.12	0.71	1.25	0.52	0.35	1.62
Control Delay	87.3	12.2	134.2	6.0	64.8	328.0
Queue Delay	0.0	1.0	0.2	1.3	4.0	0.2
Total Delay	87.3	13.1	134.4	7.3	68.8	328.2
Queue Length 50th (ft)	~533	565	~1012	111	38	~310
Queue Length 95th (ft)	m411	m375	m#851	m104	80	#499
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	534	2380	1476	961	134	190
Starvation Cap Reductn	0	392	90	257	0	0
Spillback Cap Reductn	0	83	69	0	43	2
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.12	0.85	1.33	0.71	0.52	1.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	552	1561	0	0	1692	463	43	0	282	0	0	0
Future Volume (veh/h)	552	1561	0	0	1692	463	43	0	282	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	600	1697	0	0	1839	503	47	0	307			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	535	2369	0	0	1483	817	136	0	121			
Arrive On Green	0.54	1.00	0.00	0.00	0.52	0.52	0.08	0.00	0.08			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	600	1697	0	0	1839	503	47	0	307			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	35.0	0.0	0.0	0.0	67.0	29.3	3.3	0.0	9.9			
Cycle Q Clear(g_c), s	35.0	0.0	0.0	0.0	67.0	29.3	3.3	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	535	2369	0	0	1483	817	136	0	121			
V/C Ratio(X)	1.12	0.72	0.00	0.00	1.24	0.62	0.35	0.00	2.54			
Avail Cap(c_a), veh/h	535	2391	0	0	1483	817	136	0	121			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	0.0	0.0	0.0	31.5	22.4	57.0	0.0	60.1			
Incr Delay (d2), s/veh	57.4	0.2	0.0	0.0	108.5	0.3	1.5	0.0	718.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	17.1	0.1	0.0	0.0	43.7	10.3	1.5	0.0	27.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.9	0.2	0.0	0.0	140.0	22.7	58.5	0.0	778.3			
LnGrp LOS	F	A	A	A	F	C	E	A	F			
Approach Vol, veh/h		2297			2342			354				
Approach Delay, s/veh		21.8			114.8			682.7				
Approach LOS		C			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			40.0	74.0		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			37.0	69.0		11.9				
Green Ext Time (p_c), s		57.7			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	112.3
HCM 6th LOS	F

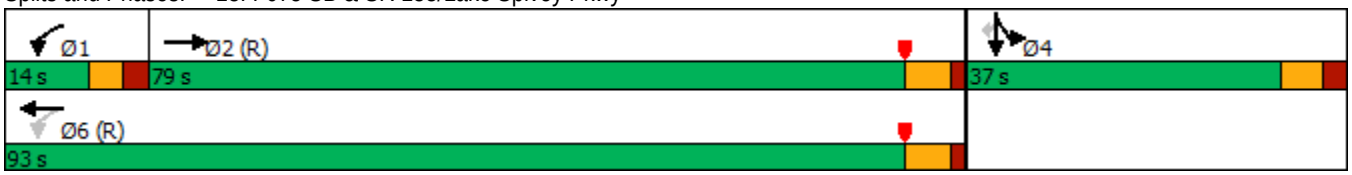
Notes

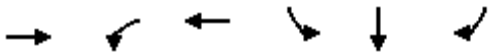
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1760	244	1498	369	0	536
Future Volume (vph)	1760	244	1498	369	0	536
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	73.1	87.6	87.6	30.0	30.0	30.0
Actuated g/C Ratio	0.56	0.67	0.67	0.23	0.23	0.23
v/c Ratio	1.25	1.53	0.85	0.52	0.52	0.92
Control Delay	136.9	276.0	8.3	49.2	49.2	69.2
Queue Delay	0.0	0.0	15.9	0.0	0.0	0.0
Total Delay	136.9	276.0	24.2	49.2	49.2	69.2
LOS	F	F	C	D	D	E
Approach Delay	136.9		59.5		61.1	
Approach LOS	F		E		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay: 91.5	Intersection LOS: F
Intersection Capacity Utilization 99.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





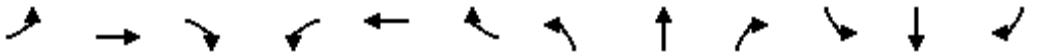
Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2015	268	1646	202	203	589
v/c Ratio	1.25	1.53	0.85	0.52	0.52	0.92
Control Delay	136.9	276.0	8.3	49.2	49.2	69.2
Queue Delay	0.0	0.0	15.9	0.0	0.0	0.0
Total Delay	136.9	276.0	24.2	49.2	49.2	69.2
Queue Length 50th (ft)	~1101	~267	761	156	157	275
Queue Length 95th (ft)	#1243	m#183	m2	243	243	#389
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1616	175	1931	394	394	653
Starvation Cap Reductn	0	0	263	0	0	0
Spillback Cap Reductn	0	0	316	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.25	1.53	1.02	0.51	0.52	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1760	74	244	1498	0	0	0	0	369	0	536
Future Volume (veh/h)	0	1760	74	244	1498	0	0	0	0	369	0	536
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1934	81	268	1646	0				405	0	589
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1645	68	166	1991	0				757	0	674
Arrive On Green	0.00	1.00	1.00	0.06	0.69	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2891	117	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	982	1033	268	1646	0				405	0	589
Grp Sat Flow(s),veh/h/ln	0	1439	1494	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	76.0	76.0	8.1	53.5	0.0				13.1	0.0	23.4
Cycle Q Clear(g_c), s	0.0	76.0	76.0	8.1	53.5	0.0				13.1	0.0	23.4
Prop In Lane	0.00		0.08	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	841	873	166	1991	0				757	0	674
V/C Ratio(X)	0.00	1.17	1.18	1.61	0.83	0.00				0.53	0.00	0.87
Avail Cap(c_a), veh/h	0	841	873	166	1991	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.51	0.51	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	45.0	14.4	0.0				45.5	0.0	49.5
Incr Delay (d2), s/veh	0.0	82.4	89.1	277.4	0.4	0.0				0.7	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	19.2	21.6	18.2	14.7	0.0				5.8	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	82.4	89.1	322.4	14.8	0.0				46.2	0.0	60.3
LnGrp LOS	A	F	F	F	B	A				D	A	E
Approach Vol, veh/h		2015			1914						994	
Approach Delay, s/veh		85.8			57.9						54.5	
Approach LOS		F			E						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.0	81.9		34.1		95.9						
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9						
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1						
Max Q Clear Time (g_c+I1), s	10.1	78.0		25.4		55.5						
Green Ext Time (p_c), s	0.0	0.0		2.3		24.7						

Intersection Summary												
HCM 6th Ctrl Delay			68.6									
HCM 6th LOS			E									

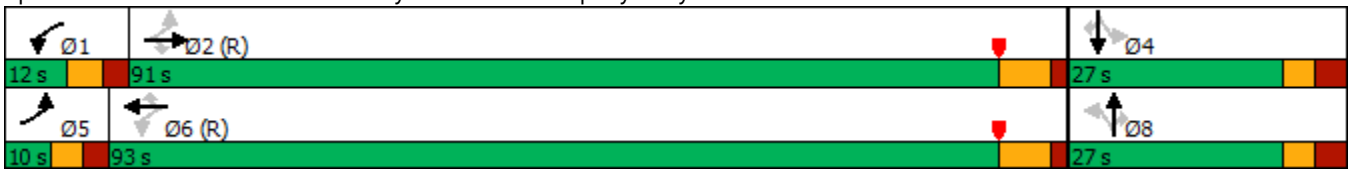
Notes

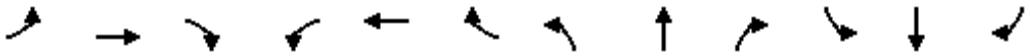
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1647	27	92	1852	47	22	3	79	91	9	63
Future Volume (vph)	32	1647	27	92	1852	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	95.1	89.0	89.0	100.3	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.73	0.68	0.68	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.27	0.83	0.03	0.56	0.87	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	8.8	9.0	0.1	17.8	15.8	0.9	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	25.4	0.0	0.0	2.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	8.8	34.4	0.1	17.8	17.8	0.9	51.4	47.7	16.0	69.3	48.6	10.5
LOS	A	C	A	B	B	A	D	D	B	E	D	B
Approach Delay		33.4			17.4			24.2			45.5	
Approach LOS		C			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 82.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy



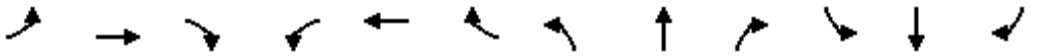


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	1810	30	101	2035	52	24	3	87	100	10	69
v/c Ratio	0.27	0.83	0.03	0.56	0.87	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	8.8	9.0	0.1	17.8	15.8	0.9	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	25.4	0.0	0.0	2.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	8.8	34.4	0.1	17.8	17.8	0.9	51.4	47.7	16.0	69.3	48.6	10.5
Queue Length 50th (ft)	2	138	0	17	933	0	18	2	5	81	8	0
Queue Length 95th (ft)	m7	243	m0	m24	#1042	m0	44	12	53	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	131	2186	1107	182	2339	1179	221	295	318	223	295	318
Starvation Cap Reductn	0	0	0	0	175	0	0	0	0	0	0	0
Spillback Cap Reductn	0	457	0	0	0	0	0	0	11	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	1.05	0.03	0.55	0.94	0.04	0.11	0.01	0.28	0.45	0.03	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1647	27	92	1852	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1647	27	92	1852	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	1810	30	101	2035	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	238	2354	1150	291	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	1810	30	101	2035	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	2354	1150	291	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.15	0.77	0.03	0.35	0.85	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	259	2354	1150	320	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	0.37	0.37	0.37	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.1	1.2	0.0	0.1	1.6	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.0	0.5	0.5	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	1.2	0.0	4.1	1.6	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		1875			2188			114			179	
Approach Delay, s/veh		1.2			1.6			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	6.0	* 84		* 21	4.4	* 86		* 21				
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8				
Green Ext Time (p_c), s	0.0	55.3		0.5	0.0	65.9		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		5.3	
HCM 6th LOS		A	

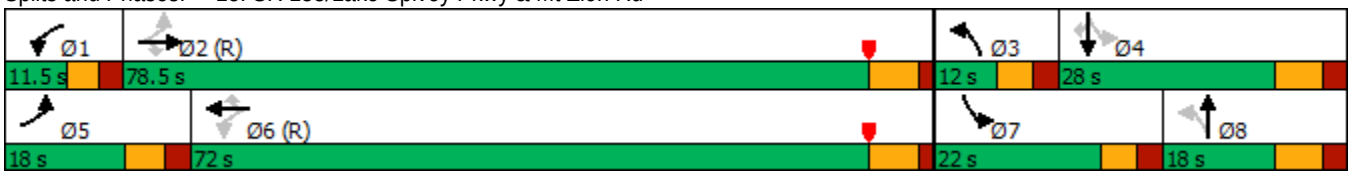
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	167	1439	84	31	1633	249	76	28	253	27	280
Future Volume (vph)	167	1439	84	31	1633	249	76	28	253	27	280
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	87.0	79.9	79.9	76.0	69.0	69.0	14.8	9.5	30.7	17.6	17.6
Actuated g/C Ratio	0.67	0.61	0.61	0.58	0.53	0.53	0.11	0.07	0.24	0.14	0.14
v/c Ratio	0.84	0.80	0.09	0.20	1.05	0.29	0.48	0.40	0.88	0.12	0.83
Control Delay	66.5	12.8	0.2	11.7	54.0	5.0	51.1	39.1	73.5	48.3	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	12.8	0.2	11.7	54.0	5.0	51.1	39.1	73.5	48.3	40.8
LOS	E	B	A	B	D	A	D	D	E	D	D
Approach Delay		17.5			46.9			45.9		56.0	
Approach LOS		B			D			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 36.5	Intersection LOS: D
Intersection Capacity Utilization 91.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





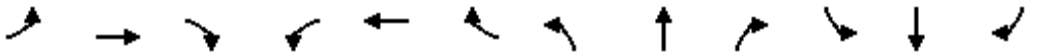
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	182	1564	91	34	1775	271	83	63	275	29	304
v/c Ratio	0.84	0.80	0.09	0.20	1.05	0.29	0.48	0.40	0.88	0.12	0.83
Control Delay	66.5	12.8	0.2	11.7	54.0	5.0	51.1	39.1	73.5	48.3	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	12.8	0.2	11.7	54.0	5.0	51.1	39.1	73.5	48.3	40.8
Queue Length 50th (ft)	90	666	0	9	~883	27	55	24	206	21	104
Queue Length 95th (ft)	m#180	603	m0	m13	#1024	m49	100	71	#284	51	#222
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	223	1963	1042	172	1695	949	174	174	312	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.80	0.09	0.20	1.05	0.29	0.48	0.36	0.88	0.10	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1439	84	31	1633	249	76	28	30	253	27	280
Future Volume (veh/h)	167	1439	84	31	1633	249	76	28	30	253	27	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	1564	91	34	1775	271	83	30	33	275	29	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	220	1843	901	273	1719	840	225	68	75	340	301	255
Arrive On Green	0.13	1.00	1.00	0.07	1.00	1.00	0.05	0.08	0.08	0.12	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	1781	1870	1585
Grp Volume(v), veh/h	182	1564	91	34	1775	271	83	0	63	275	29	304
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1781	1870	1585
Q Serve(g_s), s	6.2	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Cycle Q Clear(g_c), s	6.2	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	220	1843	901	273	1719	840	225	0	143	340	301	255
V/C Ratio(X)	0.83	0.85	0.10	0.12	1.03	0.32	0.37	0.00	0.44	0.81	0.10	1.19
Avail Cap(c_a), veh/h	265	1843	901	297	1719	840	225	0	143	340	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.43	0.43	0.43	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	0.0	12.2	0.0	0.0	51.6	0.0	56.6	47.6	46.5	54.6
Incr Delay (d2), s/veh	10.2	3.0	0.1	0.1	23.5	0.4	1.0	0.0	4.5	13.6	0.3	118.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.8	0.0	0.4	5.6	0.1	2.6	0.0	2.2	2.0	0.8	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	3.0	0.1	12.3	23.5	0.4	52.6	0.0	61.1	61.2	46.8	173.3
LnGrp LOS	C	A	A	B	F	A	D	A	E	E	D	F
Approach Vol, veh/h		1837			2080			146			608	
Approach Delay, s/veh		5.9			20.3			56.3			116.6	
Approach LOS		A			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	14.7	75.3	22.0	18.0
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.0	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.5	22.9	8.2	2.0	18.0	6.6
Green Ext Time (p_c), s	0.0	41.7	0.0	0.0	0.1	48.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

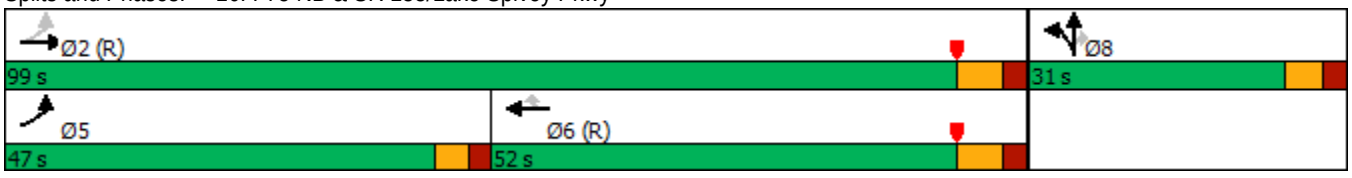
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	680	1586	1119	931	0	216
Future Volume (vph)	680	1586	1119	931	0	216
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	93.5	92.1	45.1	45.1	24.9	24.9
Actuated g/C Ratio	0.72	0.71	0.35	0.35	0.19	0.19
v/c Ratio	1.20	0.77	1.11	1.21	0.99	0.65
Control Delay	126.7	19.8	89.6	118.8	97.7	41.0
Queue Delay	0.0	2.4	0.0	0.0	0.0	0.0
Total Delay	126.7	22.2	89.6	118.8	97.7	41.0
LOS	F	C	F	F	F	D
Approach Delay		53.5	102.8		74.1	
Approach LOS		D	F		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 76.7	Intersection LOS: E
Intersection Capacity Utilization 127.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





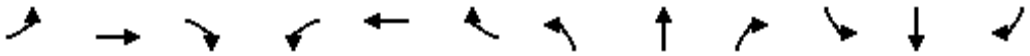
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	747	1743	1230	1023	334	237
v/c Ratio	1.20	0.77	1.11	1.21	0.99	0.65
Control Delay	126.7	19.8	89.6	118.8	97.7	41.0
Queue Delay	0.0	2.4	0.0	0.0	0.0	0.0
Total Delay	126.7	22.2	89.6	118.8	97.7	41.0
Queue Length 50th (ft)	~720	581	~613	~486	283	124
Queue Length 95th (ft)	m#727	m588	m#602	m#487	#479	217
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	623	2263	1108	842	339	367
Starvation Cap Reductn	0	375	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.92	1.11	1.21	0.99	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	680	1586	0	0	1119	931	304	0	216	0	0	0
Future Volume (veh/h)	680	1586	0	0	1119	931	304	0	216	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	747	1743	0	0	1230	0	334	0	237			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	624	2298	0	0	1125		341	0	304			
Arrive On Green	0.21	0.47	0.00	0.00	0.69	0.00	0.19	0.00	0.19			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	747	1743	0	0	1230	0	334	0	237			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	57.3	0.0	0.0	45.1	0.0	24.3	0.0	18.5			
Cycle Q Clear(g_c), s	41.5	57.3	0.0	0.0	45.1	0.0	24.3	0.0	18.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	624	2298	0	0	1125		341	0	304			
V/C Ratio(X)	1.20	0.76	0.00	0.00	1.09		0.98	0.00	0.78			
Avail Cap(c_a), veh/h	624	2298	0	0	1125		341	0	304			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.16	0.16	0.00	0.00	0.10	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	45.6	25.0	0.0	0.0	19.9	0.0	52.3	0.0	50.0			
Incr Delay (d2), s/veh	91.4	0.4	0.0	0.0	43.6	0.0	42.8	0.0	11.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	36.4	22.7	0.0	0.0	14.0	0.0	14.4	0.0	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	137.0	25.4	0.0	0.0	63.5	0.0	95.1	0.0	61.2			
LnGrp LOS	F	C	A	A	F		F	A	E			
Approach Vol, veh/h		2490			1230	A		571				
Approach Delay, s/veh		58.9			63.5			81.0				
Approach LOS		E			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		99.0			47.0	52.0		31.0				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		59.3			43.5	47.1		26.3				
Green Ext Time (p_c), s		26.5			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	63.2
HCM 6th LOS	E

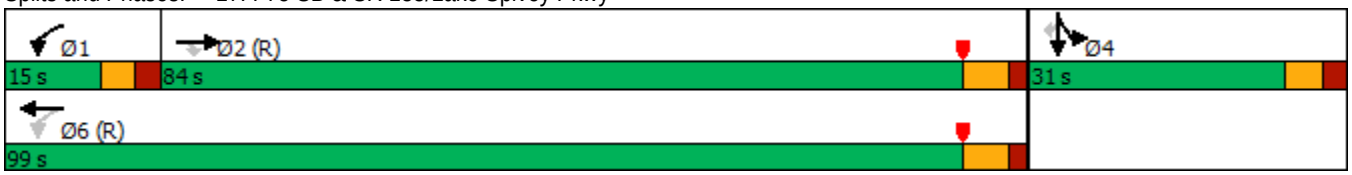
Notes

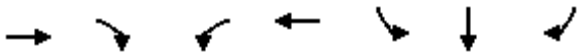
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1610	323	117	1257	673	0	266
Future Volume (vph)	1610	323	117	1257	673	0	266
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	78.2	78.2	93.2	92.7	24.8	24.8	24.8
Actuated g/C Ratio	0.60	0.60	0.72	0.71	0.19	0.19	0.19
v/c Ratio	0.93	0.33	0.74	0.61	1.17	1.17	0.81
Control Delay	16.0	0.7	47.0	1.6	150.1	150.1	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.9	0.0
Total Delay	16.0	0.7	47.0	1.6	151.1	151.1	54.3
LOS	B	A	D	A	F	F	D
Approach Delay	13.5			5.5		123.6	
Approach LOS	B			A		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 127.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1789	359	130	1397	374	374	296
v/c Ratio	0.93	0.33	0.74	0.61	1.17	1.17	0.81
Control Delay	16.0	0.7	47.0	1.6	150.1	150.1	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.9	0.0
Total Delay	16.0	0.7	47.0	1.6	151.1	151.1	54.3
Queue Length 50th (ft)	320	0	52	0	~393	~393	179
Queue Length 95th (ft)	m274	m0	m43	m0	#602	#602	#324
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1922	1095	182	2278	320	320	366
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	24	24	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.33	0.71	0.61	1.26	1.26	0.81

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1610	323	117	1257	0	0	0	0	673	0	266
Future Volume (veh/h)	0	1610	323	117	1257	0	0	0	0	673	0	266
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1789	359	130	1397	0				748	0	296
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2020	987	253	2313	0				680	0	302
Arrive On Green	0.00	1.00	1.00	0.05	0.71	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1789	359	130	1397	0				748	0	296
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.2	28.2	0.0				24.8	0.0	24.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.2	28.2	0.0				24.8	0.0	24.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2020	987	253	2313	0				680	0	302
V/C Ratio(X)	0.00	0.89	0.36	0.51	0.60	0.00				1.10	0.00	0.98
Avail Cap(c_a), veh/h	0	2020	987	297	2313	0				680	0	302
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.1	9.4	0.0				52.6	0.0	52.3
Incr Delay (d2), s/veh	0.0	0.6	0.1	0.1	0.1	0.0				65.3	0.0	45.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	1.1	8.4	0.0				16.8	0.0	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.6	0.1	7.2	9.5	0.0				117.9	0.0	98.2
LnGrp LOS	A	A	A	A	A	A				F	A	F
Approach Vol, veh/h		2148			1527						1044	
Approach Delay, s/veh		0.5			9.3						112.3	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	87.3		31.0		99.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.2	2.0		26.8		30.2
Green Ext Time (p_c), s	0.1	57.8		0.0		31.5

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

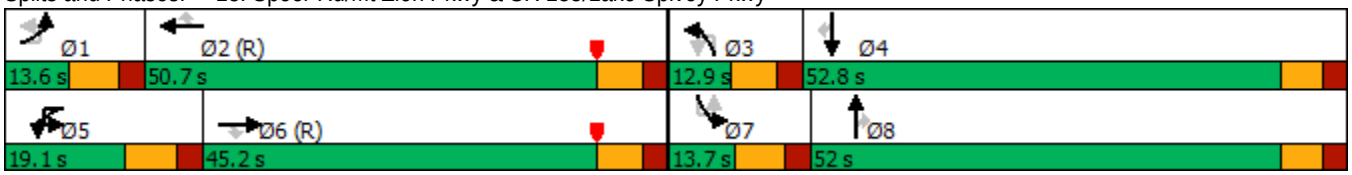
User approved volume balancing among the lanes for turning movement.

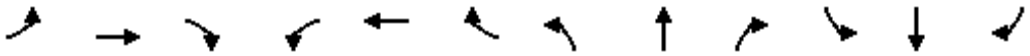
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	966	73	253	1010	146	69	191	715	156	82	66
Future Volume (vph)	79	966	73	253	1010	146	69	191	715	156	82	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.1	38.1	38.1	11.6	43.6	43.6	6.0	45.4	45.4	6.3	48.8	48.8
Actuated g/C Ratio	0.05	0.29	0.29	0.09	0.34	0.34	0.05	0.35	0.35	0.05	0.38	0.38
v/c Ratio	0.54	1.16	0.14	0.91	1.04	0.25	0.48	0.17	1.20	1.03	0.07	0.11
Control Delay	69.5	122.4	3.3	103.7	62.9	2.9	71.0	29.7	136.4	137.5	27.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5	122.4	3.3	103.7	62.9	2.9	71.0	29.7	136.4	137.5	27.5	0.3
LOS	E	F	A	F	E	A	E	C	F	F	C	A
Approach Delay		110.9			64.0			110.9			77.9	
Approach LOS		F			E			F			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 90.9	Intersection LOS: F
Intersection Capacity Utilization 107.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





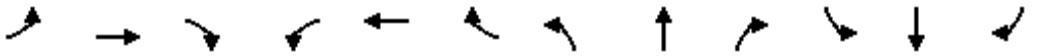
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	1062	80	278	1110	160	76	210	786	171	90	73
v/c Ratio	0.54	1.16	0.14	0.91	1.04	0.25	0.48	0.17	1.20	1.03	0.07	0.11
Control Delay	69.5	122.4	3.3	103.7	62.9	2.9	71.0	29.7	136.4	137.5	27.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5	122.4	3.3	103.7	62.9	2.9	71.0	29.7	136.4	137.5	27.5	0.3
Queue Length 50th (ft)	38	~572	4	128	~515	0	32	64	~716	~79	26	0
Queue Length 95th (ft)	m62	#713	m14	m#205	#656	m27	59	94	#965	#156	46	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	161	912	570	306	1071	637	158	1235	653	166	1327	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.16	0.14	0.91	1.04	0.25	0.48	0.17	1.20	1.03	0.07	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	966	73	253	1010	146	69	191	715	156	82	66
Future Volume (veh/h)	79	966	73	253	1010	146	69	191	715	156	82	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	1062	80	278	1110	160	76	210	786	171	90	73
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	153	926	465	308	1097	536	149	1241	554	167	1273	568
Arrive On Green	0.09	0.59	0.59	0.18	0.68	0.68	0.04	0.35	0.35	0.05	0.36	0.36
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	87	1062	80	278	1110	160	76	210	786	171	90	73
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.1	38.1	3.0	10.2	44.0	5.3	2.8	5.3	45.4	6.3	2.2	4.0
Cycle Q Clear(g_c), s	3.1	38.1	3.0	10.2	44.0	5.3	2.8	5.3	45.4	6.3	2.2	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	926	465	308	1097	536	149	1241	554	167	1273	568
V/C Ratio(X)	0.57	1.15	0.17	0.90	1.01	0.30	0.51	0.17	1.42	1.02	0.07	0.13
Avail Cap(c_a), veh/h	162	926	465	308	1097	536	159	1241	554	167	1273	568
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	26.9	19.6	52.8	21.0	14.8	60.8	29.3	42.3	61.8	27.5	28.1
Incr Delay (d2), s/veh	3.0	75.5	0.6	21.8	26.0	1.0	2.7	0.1	199.4	75.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	18.5	1.1	4.9	11.7	1.8	1.3	2.2	47.6	4.5	0.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	102.4	20.2	74.7	47.1	15.8	63.5	29.3	241.7	137.0	27.5	28.2
LnGrp LOS	E	F	C	E	F	B	E	C	F	F	C	C
Approach Vol, veh/h		1229			1548			1072			334	
Approach Delay, s/veh		94.2			48.8			187.5			83.7	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	51.1	12.5	53.2	19.1	45.2	13.7	52.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.1	46.0	4.8	6.0	12.2	40.1	8.3	47.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	100.4
HCM 6th LOS	F

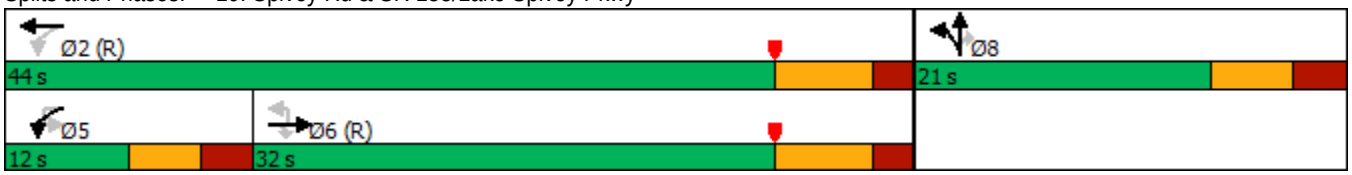
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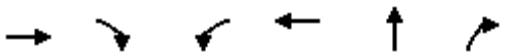
User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	761	15	120	976	0	344
Future Volume (vph)	761	15	120	976	0	344
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	32.0	32.0	12.0	44.0	21.0	21.0
Total Split (%)	49.2%	49.2%	18.5%	67.7%	32.3%	32.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	30.2	30.2	41.0	40.2	11.3	11.3
Actuated g/C Ratio	0.46	0.46	0.63	0.62	0.17	0.17
v/c Ratio	0.59	0.02	0.34	0.56	0.12	0.79
Control Delay	16.6	0.1	5.6	13.1	22.1	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.1	5.6	13.1	22.1	21.6
LOS	B	A	A	B	C	C
Approach Delay	16.3			12.3	21.6	
Approach LOS	B			B	C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 33 (51%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	846	17	133	1084	37	382
v/c Ratio	0.59	0.02	0.34	0.56	0.12	0.79
Control Delay	16.6	0.1	5.6	13.1	22.1	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.1	5.6	13.1	22.1	21.6
Queue Length 50th (ft)	138	0	14	468	12	45
Queue Length 95th (ft)	205	0	m24	m461	33	#139
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1445	802	390	1925	385	545
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.02	0.34	0.56	0.10	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	0	761	15	120	976	0	33	0	344	0	0
Future Volume (veh/h)	0	0	761	15	120	976	0	33	0	344	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		0	1663	1826	1826	1663	0	1856	1856	1856		
Adj Flow Rate, veh/h		0	846	17	133	1084	0	37	0	382		
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %		0	16	5	5	16	0	3	3	3		
Cap, veh/h		0	1251	613	366	1808	0	389	0	346		
Arrive On Green		0.00	0.40	0.40	0.17	1.00	0.00	0.22	0.00	0.22		
Sat Flow, veh/h		0	3243	1547	1739	3243	0	1767	0	1572		
Grp Volume(v), veh/h		0	846	17	133	1084	0	37	0	382		
Grp Sat Flow(s),veh/h/ln		0	1580	1547	1739	1580	0	1767	0	1572		
Q Serve(g_s), s		0.0	14.4	0.4	2.6	0.0	0.0	1.1	0.0	14.3		
Cycle Q Clear(g_c), s		0.0	14.4	0.4	2.6	0.0	0.0	1.1	0.0	14.3		
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00		
Lane Grp Cap(c), veh/h		0	1251	613	366	1808	0	389	0	346		
V/C Ratio(X)		0.00	0.68	0.03	0.36	0.60	0.00	0.10	0.00	1.10		
Avail Cap(c_a), veh/h		0	1251	613	381	1808	0	389	0	346		
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)		0.00	1.00	1.00	0.21	0.21	0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh		0.0	16.2	12.0	10.0	0.0	0.0	20.2	0.0	25.4		
Incr Delay (d2), s/veh		0.0	2.9	0.1	0.1	0.3	0.0	0.1	0.0	79.4		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		0.0	4.8	0.1	0.7	0.1	0.0	0.4	0.0	12.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	19.1	12.1	10.1	0.3	0.0	20.3	0.0	104.8		
LnGrp LOS		A	B	B	B	A	A	C	A	F		
Approach Vol, veh/h			863			1217			419			
Approach Delay, s/veh			19.0			1.4			97.3			
Approach LOS			B			A			F			

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	44.0			11.5	32.5		21.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	37.2			6.0	25.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			4.6	16.4		16.3					
Green Ext Time (p_c), s	20.6			0.0	6.0		0.0					

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(I)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	471.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	323	351	126	129	94
Future Vol, veh/h	200	323	351	126	129	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	328	530	575	207	211	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	782	0	-	0	1865	679
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	1186	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	831	-	-	-	~ 79	446
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	286	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	831	-	-	-	~ 35	446
Mov Cap-2 Maneuver	-	-	-	-	~ 35	-
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	286	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	$ 2576.9
HCM LOS			F

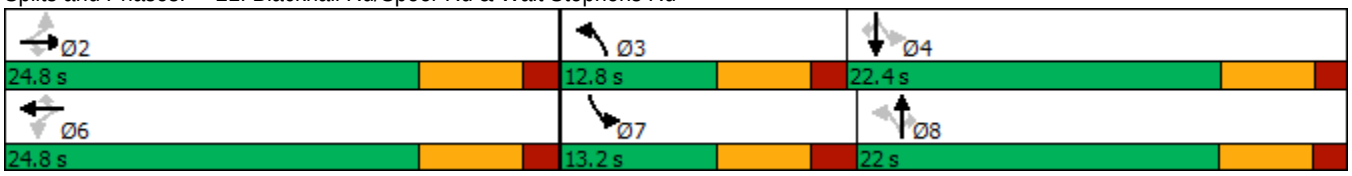
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	831	-	-	-	57
HCM Lane V/C Ratio	0.395	-	-	-	6.414
HCM Control Delay (s)	12.1	0	-		$ 2576.9
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	1.9	-	-	-	41.8

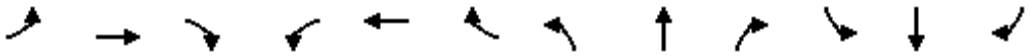
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	316	52	124	328	589	46	355	106	221	74	15
Future Volume (vph)	30	316	52	124	328	589	46	355	106	221	74	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	17.8	17.8	17.8	17.8	17.8	17.8	22.2	15.1	15.1	24.6	21.0	21.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.26	0.26	0.42	0.36	0.36
v/c Ratio	0.15	0.62	0.10	0.59	0.66	0.85	0.09	0.82	0.22	0.67	0.12	0.03
Control Delay	17.2	23.4	0.3	30.5	24.4	19.4	8.9	37.2	2.7	21.7	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	23.4	0.3	30.5	24.4	19.4	8.9	37.2	2.7	21.7	16.3	0.1
LOS	B	C	A	C	C	B	A	D	A	C	B	A
Approach Delay		19.9			22.3			27.5			19.3	
Approach LOS		B			C			C			B	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 58.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 83.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd

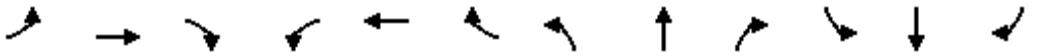




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	355	58	139	369	662	52	399	119	248	83	17
v/c Ratio	0.15	0.62	0.10	0.59	0.66	0.85	0.09	0.82	0.22	0.67	0.12	0.03
Control Delay	17.2	23.4	0.3	30.5	24.4	19.4	8.9	37.2	2.7	21.7	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	23.4	0.3	30.5	24.4	19.4	8.9	37.2	2.7	21.7	16.3	0.1
Queue Length 50th (ft)	9	108	0	42	114	64	9	133	0	50	23	0
Queue Length 95th (ft)	27	183	0	#108	191	#256	24	#257	18	#116	51	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	235	593	610	245	587	797	553	519	560	371	671	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.60	0.10	0.57	0.63	0.83	0.09	0.77	0.21	0.67	0.12	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	316	52	124	328	589	46	355	106	221	74	15
Future Volume (veh/h)	30	316	52	124	328	589	46	355	106	221	74	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	355	58	139	369	662	52	399	119	248	83	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	204	593	503	275	589	499	567	465	394	377	575	487
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.25	0.25	0.12	0.31	0.31
Sat Flow, veh/h	547	1870	1585	965	1856	1572	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	34	355	58	139	369	662	52	399	119	248	83	17
Grp Sat Flow(s),veh/h/ln	547	1870	1585	965	1856	1572	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.3	9.3	1.5	8.3	9.9	18.5	1.2	11.9	3.6	6.0	1.9	0.4
Cycle Q Clear(g_c), s	13.2	9.3	1.5	17.6	9.9	18.5	1.2	11.9	3.6	6.0	1.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	593	503	275	589	499	567	465	394	377	575	487
V/C Ratio(X)	0.17	0.60	0.12	0.50	0.63	1.33	0.09	0.86	0.30	0.66	0.14	0.03
Avail Cap(c_a), veh/h	204	593	503	275	589	499	660	520	440	377	575	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	16.8	14.1	24.2	17.0	19.9	14.0	20.9	17.8	15.1	14.6	14.1
Incr Delay (d2), s/veh	0.8	2.5	0.2	3.1	3.0	160.5	0.1	12.4	0.4	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.7	0.5	1.9	3.9	27.7	0.4	6.0	1.2	2.3	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	19.3	14.3	27.3	20.0	180.4	14.1	33.3	18.2	19.2	14.7	14.2
LnGrp LOS	C	B	B	C	B	F	B	C	B	B	B	B
Approach Vol, veh/h		447			1170			570			348	
Approach Delay, s/veh		19.0			111.6			28.4			17.9	
Approach LOS		B			F			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	9.8	23.7		24.8	13.2	20.3				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		15.2	3.2	3.9		20.5	8.0	13.9				
Green Ext Time (p_c), s		1.2	0.0	0.3		0.0	0.0	0.6				

Intersection Summary		
HCM 6th Ctrl Delay		63.7
HCM 6th LOS		E

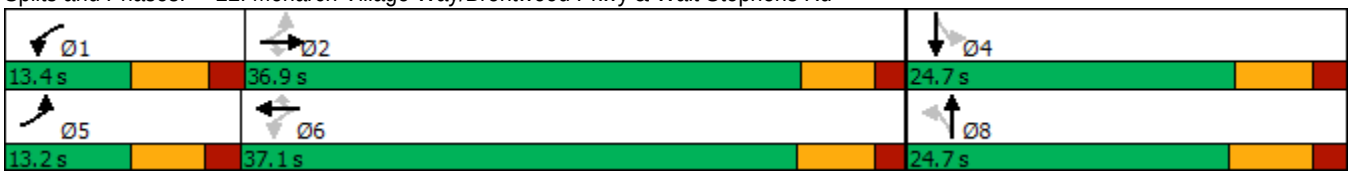
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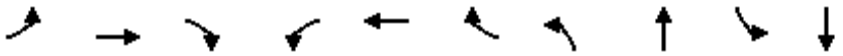
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	26	489	68	101	742	51	187	29	75	36
Future Volume (vph)	26	489	68	101	742	51	187	29	75	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	36.9	36.9	13.4	37.1	37.1	24.7	24.7	24.7	24.7
Total Split (%)	17.6%	49.2%	49.2%	17.9%	49.5%	49.5%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	34.6	29.6	29.6	37.1	34.8	34.8	15.5	15.5	15.8	15.8
Actuated g/C Ratio	0.51	0.43	0.43	0.54	0.51	0.51	0.23	0.23	0.23	0.23
v/c Ratio	0.11	0.69	0.10	0.29	0.89	0.07	0.76	0.39	0.31	0.32
Control Delay	7.7	22.8	0.6	9.2	33.4	0.2	45.0	9.1	26.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	22.8	0.6	9.2	33.4	0.2	45.0	9.1	26.3	10.5
LOS	A	C	A	A	C	A	D	A	C	B
Approach Delay		19.6			28.7			28.1		16.3
Approach LOS		B			C			C		B

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 68.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 24.7	Intersection LOS: C
Intersection Capacity Utilization 84.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd

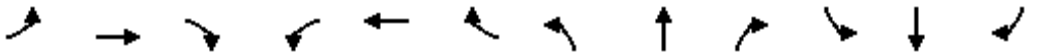




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	556	77	115	843	58	213	191	85	149
v/c Ratio	0.11	0.69	0.10	0.29	0.89	0.07	0.76	0.39	0.31	0.32
Control Delay	7.7	22.8	0.6	9.2	33.4	0.2	45.0	9.1	26.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	22.8	0.6	9.2	33.4	0.2	45.0	9.1	26.3	10.5
Queue Length 50th (ft)	5	210	0	21	268	0	86	11	31	14
Queue Length 95th (ft)	15	314	3	41	#643	0	#184	58	68	56
Internal Link Dist (ft)		2243			4110			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	278	863	810	394	943	871	331	553	323	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.64	0.10	0.29	0.89	0.07	0.64	0.35	0.26	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	489	68	101	742	51	187	29	139	75	36	95
Future Volume (veh/h)	26	489	68	101	742	51	187	29	139	75	36	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	556	77	115	843	58	212	33	158	85	41	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	180	727	616	360	809	685	323	71	341	285	115	303
Arrive On Green	0.04	0.39	0.39	0.09	0.44	0.44	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1767	1856	1572	1239	281	1347	1192	455	1199
Grp Volume(v), veh/h	30	556	77	115	843	58	212	0	191	85	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	1856	1572	1239	0	1628	1192	0	1654
Q Serve(g_s), s	0.7	18.4	2.2	2.6	31.0	1.5	12.1	0.0	7.1	4.6	0.0	5.3
Cycle Q Clear(g_c), s	0.7	18.4	2.2	2.6	31.0	1.5	17.3	0.0	7.1	11.7	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		0.72
Lane Grp Cap(c), veh/h	180	727	616	360	809	685	323	0	412	285	0	419
V/C Ratio(X)	0.17	0.76	0.12	0.32	1.04	0.08	0.66	0.00	0.46	0.30	0.00	0.36
Avail Cap(c_a), veh/h	277	815	691	378	809	685	323	0	412	290	0	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	18.9	14.0	13.2	20.1	11.8	28.9	0.0	22.5	27.4	0.0	21.8
Incr Delay (d2), s/veh	0.2	5.1	0.2	0.2	43.2	0.1	4.8	0.0	0.8	0.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	7.7	0.7	0.8	20.6	0.5	3.9	0.0	2.7	1.3	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	24.0	14.2	13.4	63.3	11.9	33.7	0.0	23.3	28.0	0.0	22.3
LnGrp LOS	B	C	B	B	F	B	C	A	C	C	A	C
Approach Vol, veh/h		663			1016			403			234	
Approach Delay, s/veh		22.5			54.7			28.8			24.4	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	33.8		24.7	9.3	37.1		24.7				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 31		* 18	7.0	* 31		18.0				
Max Q Clear Time (g_c+I1), s	4.6	20.4		13.7	2.7	33.0		19.3				
Green Ext Time (p_c), s	0.0	4.5		0.5	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		37.9	
HCM 6th LOS		D	

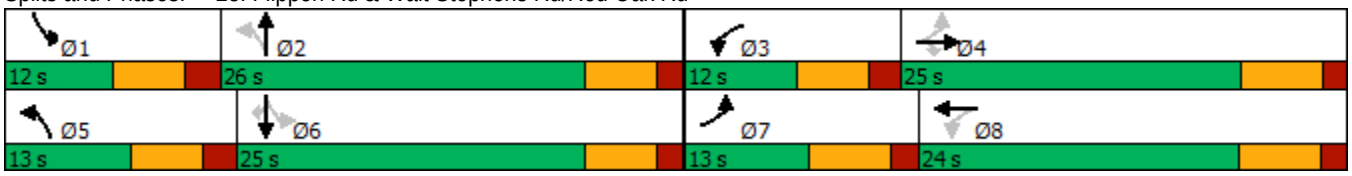
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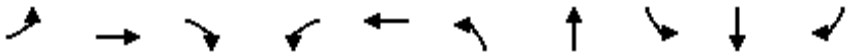
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	247	176	432	20	230	364	356	21	303	312
Future Volume (vph)	247	176	432	20	230	364	356	21	303	312
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	26.0	23.5	23.5	21.3	14.9	28.4	26.2	23.2	17.6	17.6
Actuated g/C Ratio	0.37	0.33	0.33	0.30	0.21	0.40	0.37	0.33	0.25	0.25
v/c Ratio	0.79	0.32	0.57	0.05	0.73	1.16	0.60	0.07	0.74	0.54
Control Delay	37.6	21.6	5.6	13.8	37.6	124.0	25.8	13.3	36.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	21.6	5.6	13.8	37.6	124.0	25.8	13.3	36.0	6.3
LOS	D	C	A	B	D	F	C	B	D	A
Approach Delay		18.1			35.9		74.3		20.7	
Approach LOS		B			D		E		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 70.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 37.2	Intersection LOS: D
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



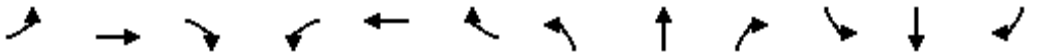


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	274	196	480	22	285	404	414	23	337	347
v/c Ratio	0.79	0.32	0.57	0.05	0.73	1.16	0.60	0.07	0.74	0.54
Control Delay	37.6	21.6	5.6	13.8	37.6	124.0	25.8	13.3	36.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	21.6	5.6	13.8	37.6	124.0	25.8	13.3	36.0	6.3
Queue Length 50th (ft)	86	58	0	6	117	~154	129	6	138	0
Queue Length 95th (ft)	#170	134	71	19	196	#336	#325	19	#251	60
Internal Link Dist (ft)		2177			3175		1869		1397	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	345	622	848	407	470	347	689	325	506	681
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.32	0.57	0.05	0.61	1.16	0.60	0.07	0.67	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	247	176	432	20	230	26	364	356	16	21	303	312
Future Volume (veh/h)	247	176	432	20	230	26	364	356	16	21	303	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	274	196	480	22	256	29	404	396	18	23	337	347
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	335	510	432	298	326	37	354	585	27	289	479	406
Arrive On Green	0.10	0.27	0.27	0.03	0.20	0.20	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	1781	1870	1585	1767	1637	185	1781	1775	81	1753	1841	1560
Grp Volume(v), veh/h	274	196	480	22	0	285	404	0	414	23	337	347
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1822	1781	0	1856	1753	1841	1560
Q Serve(g_s), s	6.9	5.9	19.0	0.7	0.0	10.4	7.0	0.0	13.4	0.7	11.6	14.8
Cycle Q Clear(g_c), s	6.9	5.9	19.0	0.7	0.0	10.4	7.0	0.0	13.4	0.7	11.6	14.8
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	335	510	432	298	0	363	354	0	612	289	479	406
V/C Ratio(X)	0.82	0.38	1.11	0.07	0.00	0.79	1.14	0.00	0.68	0.08	0.70	0.86
Avail Cap(c_a), veh/h	335	510	432	402	0	468	354	0	612	385	512	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	20.6	25.4	21.0	0.0	26.5	22.8	0.0	20.2	18.3	23.4	24.5
Incr Delay (d2), s/veh	14.6	0.5	77.1	0.1	0.0	6.6	92.5	0.0	3.9	0.1	5.4	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	2.4	15.8	0.3	0.0	4.9	11.2	0.0	5.7	0.2	5.1	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	21.1	102.4	21.1	0.0	33.1	115.3	0.0	24.1	18.4	28.8	41.0
LnGrp LOS	D	C	F	C	A	C	F	A	C	B	C	D
Approach Vol, veh/h		950			307			818			707	
Approach Delay, s/veh		66.9			32.2			69.2			34.4	
Approach LOS		E			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	28.6	7.9	25.1	13.0	23.7	13.0	20.0
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.7	15.4	2.7	21.0	9.0	16.8	8.9	12.4
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	1.4	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	55.5
HCM 6th LOS	E

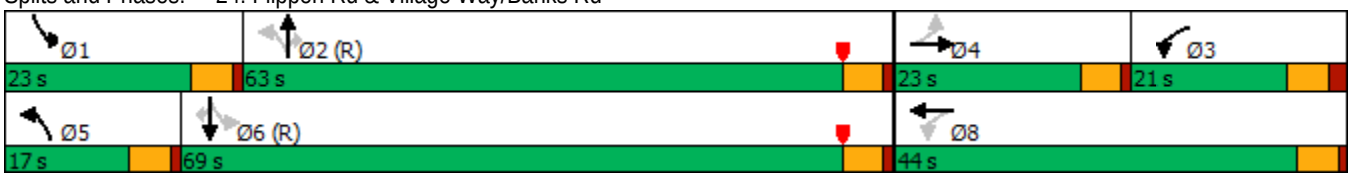
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	19	4	117	2	1	477	145	226	529	7
Future Volume (vph)	19	4	117	2	1	477	145	226	529	7
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	5.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	11.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	23.0	23.0	21.0	44.0	17.0	63.0	63.0	23.0	69.0	69.0
Total Split (%)	17.7%	17.7%	16.2%	33.8%	13.1%	48.5%	48.5%	17.7%	53.1%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	22.2	23.2	87.0	77.0	77.0	96.8	93.8	93.8
Actuated g/C Ratio		0.12	0.17	0.18	0.67	0.59	0.59	0.74	0.72	0.72
v/c Ratio		0.43	0.48	0.48	0.00	0.48	0.16	0.42	0.44	0.01
Control Delay		60.0	53.2	8.9	7.0	18.9	3.5	8.0	10.8	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		60.0	53.2	8.9	7.0	18.9	3.5	8.0	10.8	0.0
LOS		E	D	A	A	B	A	A	B	A
Approach Delay		60.0		25.1		15.3			9.9	
Approach LOS		E		C		B			A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	131	227	1	536	163	254	594	8
v/c Ratio	0.43	0.48	0.48	0.00	0.48	0.16	0.42	0.44	0.01
Control Delay	60.0	53.2	8.9	7.0	18.9	3.5	8.0	10.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	53.2	8.9	7.0	18.9	3.5	8.0	10.8	0.0
Queue Length 50th (ft)	20	97	1	0	261	4	63	185	0
Queue Length 95th (ft)	57	150	63	2	415	41	108	413	0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	93	340	637	642	1114	990	629	1344	1196
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.39	0.36	0.00	0.48	0.16	0.40	0.44	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	4	8	117	2	200	1	477	145	226	529	7
Future Volume (veh/h)	19	4	8	117	2	200	1	477	145	226	529	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1900	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	21	4	9	131	2	225	1	536	163	254	594	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	3	0	0	0	1	3	0	2	0
Cap, veh/h	45	13	5	227	2	270	532	1189	992	562	1319	1135
Arrive On Green	0.08	0.08	0.08	0.05	0.17	0.17	0.00	0.63	0.63	0.08	0.71	0.71
Sat Flow, veh/h	0	155	56	1767	14	1598	1810	1885	1572	1810	1870	1610
Grp Volume(v), veh/h	34	0	0	131	0	227	1	536	163	254	594	8
Grp Sat Flow(s),veh/h/ln	210	0	0	1767	0	1612	1810	1885	1572	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	17.7	0.0	19.1	3.5	5.9	17.8	0.2
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.0	0.0	17.7	0.0	19.1	3.5	5.9	17.8	0.2
Prop In Lane	0.62		0.26	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	0	0	227	0	273	532	1189	992	562	1319	1135
V/C Ratio(X)	0.55	0.00	0.00	0.58	0.00	0.83	0.00	0.45	0.16	0.45	0.45	0.01
Avail Cap(c_a), veh/h	137	0	0	344	0	484	694	1189	992	673	1319	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	60.0	0.0	0.0	56.0	0.0	52.2	9.0	12.4	4.0	8.4	8.3	5.7
Incr Delay (d2), s/veh	15.2	0.0	0.0	2.3	0.0	12.9	0.0	1.2	0.4	0.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	4.2	0.0	8.1	0.0	7.7	1.9	2.0	6.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	0.0	0.0	58.3	0.0	65.1	9.0	13.6	4.4	9.0	9.1	5.7
LnGrp LOS	E	A	A	E	A	E	A	B	A	A	A	A
Approach Vol, veh/h		34			358			700			856	
Approach Delay, s/veh		75.2			62.7			11.5			9.0	
Approach LOS		E			E			B			A	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	87.0	12.4	15.6	5.4	96.7		28.0				
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0		* 6				
Max Green Setting (Gmax), s	18.0	58.0	15.0	18.0	12.0	64.0		* 39				
Max Q Clear Time (g_c+I1), s	7.9	21.1	2.0	12.6	2.0	19.8		19.7				
Green Ext Time (p_c), s	0.8	8.8	0.2	0.1	0.0	8.7		2.3				

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	351	250	45	52	26
Future Vol, veh/h	26	351	250	45	52	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	408	291	52	60	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	343	0	-	0	785	317
Stage 1	-	-	-	-	317	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1216	-	-	-	361	724
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1216	-	-	-	349	724
Mov Cap-2 Maneuver	-	-	-	-	349	-
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	630	-

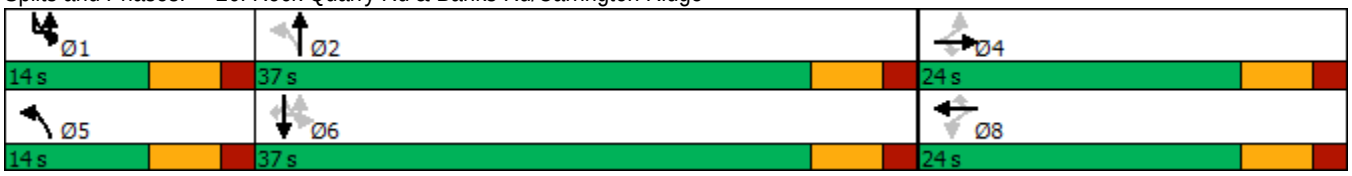
Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1216	-	-	-	422
HCM Lane V/C Ratio	0.025	-	-	-	0.215
HCM Control Delay (s)	8	0	-	-	15.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	104	11	287	57	23	11	173	442	3	666	68
Future Volume (vph)	104	11	287	57	23	11	173	442	3	666	68
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	37.0	14.0	37.0	37.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	18.7%	49.3%	18.7%	49.3%	49.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)		12.0	12.0		12.0	12.0	36.1	34.8	29.0	22.8	22.8
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.59	0.57	0.47	0.37	0.37
v/c Ratio		0.51	0.56		0.34	0.03	0.42	0.26	0.01	0.57	0.11
Control Delay		31.2	7.9		26.5	0.1	9.0	8.3	6.0	17.4	1.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		31.2	7.9		26.5	0.1	9.0	8.3	6.0	17.4	1.1
LOS		C	A		C	A	A	A	A	B	A
Approach Delay		14.6			23.3			8.5		15.8	
Approach LOS		B			C			A		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 61.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

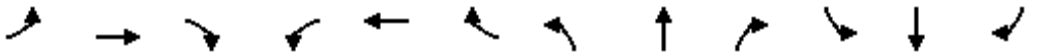
Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	126	315	88	12	190	506	3	732	75
v/c Ratio	0.51	0.56	0.34	0.03	0.42	0.26	0.01	0.57	0.11
Control Delay	31.2	7.9	26.5	0.1	9.0	8.3	6.0	17.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	7.9	26.5	0.1	9.0	8.3	6.0	17.4	1.1
Queue Length 50th (ft)	42	2	29	0	26	37	0	106	0
Queue Length 95th (ft)	99	62	72	0	63	111	4	178	7
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	382	697	401	579	458	1998	573	1790	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.45	0.22	0.02	0.41	0.25	0.01	0.41	0.09

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	11	287	57	23	11	173	442	18	3	666	68
Future Volume (veh/h)	104	11	287	57	23	11	173	442	18	3	666	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1900	1870	1826	1826	1900	1826	1841
Adj Flow Rate, veh/h	114	12	315	63	25	12	190	486	20	3	732	75
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	1	0	0	0	2	5	5	0	5	4
Cap, veh/h	109	6	456	98	24	459	389	1443	59	421	1164	523
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.09	0.42	0.42	0.00	0.34	0.34
Sat Flow, veh/h	0	22	1598	0	84	1610	1781	3396	140	1810	3469	1560
Grp Volume(v), veh/h	126	0	315	88	0	12	190	248	258	3	732	75
Grp Sat Flow(s),veh/h/ln	22	0	1598	84	0	1610	1781	1735	1801	1810	1735	1560
Q Serve(g_s), s	0.0	0.0	11.1	0.0	0.0	0.3	4.1	6.1	6.1	0.1	11.2	2.1
Cycle Q Clear(g_c), s	18.0	0.0	11.1	18.0	0.0	0.3	4.1	6.1	6.1	0.1	11.2	2.1
Prop In Lane	0.90		1.00	0.72		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	115	0	456	122	0	459	389	737	765	421	1164	523
V/C Ratio(X)	1.10	0.00	0.69	0.72	0.00	0.03	0.49	0.34	0.34	0.01	0.63	0.14
Avail Cap(c_a), veh/h	115	0	456	122	0	459	446	852	884	642	1704	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	20.1	26.8	0.0	16.3	12.3	12.2	12.2	13.8	17.7	14.6
Incr Delay (d2), s/veh	112.1	0.0	4.4	18.9	0.0	0.0	0.7	0.6	0.6	0.0	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	4.4	1.9	0.0	0.1	1.3	2.0	2.1	0.0	3.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.7	0.0	24.5	45.7	0.0	16.3	13.0	12.8	12.7	13.8	18.9	14.9
LnGrp LOS	F	A	C	D	A	B	B	B	B	B	B	B
Approach Vol, veh/h		441			100			696			810	
Approach Delay, s/veh		58.3			42.2			12.8			18.5	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	32.8		24.0	12.0	27.2		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	31.0		18.0	8.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	8.1		20.0	6.1	13.2		20.0				
Green Ext Time (p_c), s	0.0	5.3		0.0	0.1	8.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		26.3	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	121	1	37	2	0	1	37	499	2	1	711	158
Future Vol, veh/h	121	1	37	2	0	1	37	499	2	1	711	158
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	0	7	0	0	0	5	5	0	0	5	5
Mvmt Flow	130	1	40	2	0	1	40	537	2	1	765	170

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1116	1386	383	1002	-	269	935	0	0	539	0	0
Stage 1	767	767	-	617	-	-	-	-	-	-	-	-
Stage 2	349	619	-	385	-	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.5	7.04	7.5	-	6.9	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	6.64	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4	3.37	3.5	-	3.3	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	156	144	601	200	0	735	710	-	-	1040	-	-
Stage 1	350	414	-	449	0	-	-	-	-	-	-	-
Stage 2	627	483	-	615	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	149	136	601	178	-	735	710	-	-	1040	-	-
Mov Cap-2 Maneuver	149	136	-	178	-	-	-	-	-	-	-	-
Stage 1	330	414	-	424	-	-	-	-	-	-	-	-
Stage 2	591	456	-	572	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	9.9	0.7	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	710	-	-	601	735	1040	-	-
HCM Lane V/C Ratio	0.056	-	-	0.066	0.001	0.001	-	-
HCM Control Delay (s)	10.4	-	-	11.4	9.9	8.5	-	-
HCM Lane LOS	B	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0	0	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	149	6	5	180	4	6	66	9	5	72	90
Future Vol, veh/h	61	149	6	5	180	4	6	66	9	5	72	90
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	2	0	0	8	0	0	2	14	0	2	0
Mvmt Flow	77	189	8	6	228	5	8	84	11	6	91	114
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.6	10.9	9.6	10.3
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	28%	3%	3%
Vol Thru, %	81%	69%	95%	43%
Vol Right, %	11%	3%	2%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	216	189	167
LT Vol	6	61	5	5
Through Vol	66	149	180	72
RT Vol	9	6	4	90
Lane Flow Rate	103	273	239	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.158	0.396	0.342	0.3
Departure Headway (Hd)	5.548	5.213	5.153	5.101
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	646	692	699	704
Service Time	3.586	3.243	3.184	3.134
HCM Lane V/C Ratio	0.159	0.395	0.342	0.3
HCM Control Delay	9.6	11.6	10.9	10.3
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.6	1.9	1.5	1.3

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	159	52	13	343	54	68	7	18	16	5	36
Future Vol, veh/h	28	159	52	13	343	54	68	7	18	16	5	36
Peak Hour Factor	0.90	0.90	0.90	0.94	0.90	0.94	0.90	0.94	0.94	0.94	0.94	0.90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	31	177	58	14	381	57	76	7	19	17	5	40
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	10.6	15.9	10	9.3
HCM LOS	B	C	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	73%	100%	0%	100%	0%	28%
Vol Thru, %	8%	0%	75%	0%	86%	9%
Vol Right, %	19%	0%	25%	0%	14%	63%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	28	211	13	397	57
LT Vol	68	28	0	13	0	16
Through Vol	7	0	159	0	343	5
RT Vol	18	0	52	0	54	36
Lane Flow Rate	102	31	234	14	439	62
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.166	0.052	0.346	0.022	0.623	0.097
Departure Headway (Hd)	5.85	5.987	5.307	5.745	5.111	5.63
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	615	602	682	616	697	638
Service Time	3.865	3.687	3.007	3.542	2.907	3.647
HCM Lane V/C Ratio	0.166	0.051	0.343	0.023	0.63	0.097
HCM Control Delay	10	9	10.8	8.7	16.1	9.3
HCM Lane LOS	A	A	B	A	C	A
HCM 95th-tile Q	0.6	0.2	1.5	0.1	4.4	0.3

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	22	21	0	54	8	647	8	25	500	16
Future Vol, veh/h	34	0	22	21	0	54	8	647	8	25	500	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	4	4	0
Mvmt Flow	38	0	24	23	0	60	9	719	9	28	556	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1384	1358	556	1370	1367	719	574	0	0	728	0	0
Stage 1	612	612	-	737	737	-	-	-	-	-	-	-
Stage 2	772	746	-	633	630	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	122	150	534	124	148	428	1009	-	-	866	-	-
Stage 1	484	487	-	410	428	-	-	-	-	-	-	-
Stage 2	395	424	-	468	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	102	144	534	115	142	428	1009	-	-	866	-	-
Mov Cap-2 Maneuver	102	144	-	115	142	-	-	-	-	-	-	-
Stage 1	480	471	-	406	424	-	-	-	-	-	-	-
Stage 2	337	420	-	432	463	-	-	-	-	-	-	-

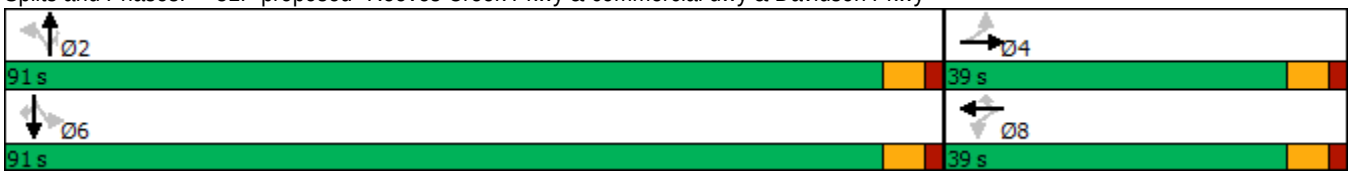
Approach	EB	WB	NB	SB
HCM Control Delay, s	45	27.4	0.1	0.4
HCM LOS	E	D		

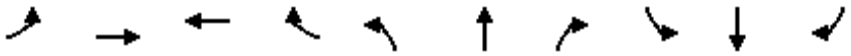
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1009	-	-	150	243	866	-	-
HCM Lane V/C Ratio	0.009	-	-	0.415	0.343	0.032	-	-
HCM Control Delay (s)	8.6	-	-	45	27.4	9.3	-	-
HCM Lane LOS	A	-	-	E	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.8	1.5	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	33	13	148	18	280	6	403	56	169	668	45
Future Volume (vph)	33	13	148	18	280	6	403	56	169	668	45
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8			2			6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	4	4	8	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	91.0	91.0	91.0	91.0	91.0	91.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	21.1	21.1		21.1	21.1	85.3	85.3	85.3	85.3	85.3	85.3
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.72	0.72	0.72	0.72	0.72	0.72
v/c Ratio	0.23	0.05		0.74	0.57	0.02	0.33	0.05	0.29	0.54	0.04
Control Delay	43.9	32.6		63.7	8.7	6.8	7.7	1.8	8.4	10.5	2.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	32.6		63.7	8.7	6.8	7.7	1.8	8.4	10.5	2.0
LOS	D	C		E	A	A	A	A	A	B	A
Approach Delay		40.2		29.2			7.0			9.6	
Approach LOS		D		C			A			A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 118.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 70.1%	ICU Level of Service C
Analysis Period (min) 15	

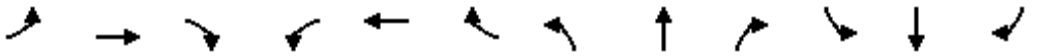
Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	37	18	184	311	7	448	62	188	742	50
v/c Ratio	0.23	0.05	0.74	0.57	0.02	0.33	0.05	0.29	0.54	0.04
Control Delay	43.9	32.6	63.7	8.7	6.8	7.7	1.8	8.4	10.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	32.6	63.7	8.7	6.8	7.7	1.8	8.4	10.5	2.0
Queue Length 50th (ft)	24	9	134	0	1	108	0	44	224	0
Queue Length 95th (ft)	56	30	214	74	8	214	15	105	432	14
Internal Link Dist (ft)		239	814			604			1282	
Turn Bay Length (ft)										
Base Capacity (vph)	258	516	390	675	418	1367	1180	648	1367	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.03	0.47	0.46	0.02	0.33	0.05	0.29	0.54	0.04

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	13	4	148	18	280	6	403	56	169	668	45
Future Volume (veh/h)	33	13	4	148	18	280	6	403	56	169	668	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	14	4	164	20	311	7	448	62	188	742	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	305	87	324	33	346	398	1307	1108	593	1307	1108
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1066	1421	406	1251	153	1610	696	1900	1610	904	1900	1610
Grp Volume(v), veh/h	37	0	18	184	0	311	7	448	62	188	742	50
Grp Sat Flow(s),veh/h/ln	1066	0	1827	1404	0	1610	696	1900	1610	904	1900	1610
Q Serve(g_s), s	4.0	0.0	1.0	14.2	0.0	23.2	0.6	11.9	1.5	13.3	24.7	1.2
Cycle Q Clear(g_c), s	19.2	0.0	1.0	15.1	0.0	23.2	25.4	11.9	1.5	25.2	24.7	1.2
Prop In Lane	1.00		0.22	0.89		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	0	393	357	0	346	398	1307	1108	593	1307	1108
V/C Ratio(X)	0.24	0.00	0.05	0.52	0.00	0.90	0.02	0.34	0.06	0.32	0.57	0.05
Avail Cap(c_a), veh/h	212	0	488	433	0	430	398	1307	1108	593	1307	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	0.0	38.5	44.4	0.0	47.2	16.4	7.9	6.3	13.0	9.9	6.2
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.2	0.0	18.5	0.1	0.7	0.1	1.4	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.4	5.2	0.0	11.0	0.1	4.4	0.5	2.7	9.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	0.0	38.5	45.6	0.0	65.7	16.4	8.6	6.4	14.4	11.7	6.3
LnGrp LOS	D	A	D	D	A	E	B	A	A	B	B	A
Approach Vol, veh/h		55			495			517			980	
Approach Delay, s/veh		48.6			58.2			8.4			11.9	
Approach LOS		D			E			A			B	

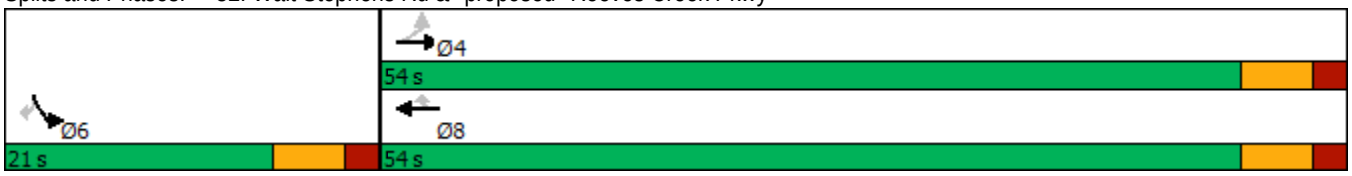
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		91.0		32.6		91.0		32.6				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		85.0		33.0		85.0		33.0				
Max Q Clear Time (g_c+I1), s		27.4		21.2		27.2		25.2				
Green Ext Time (p_c), s		3.0		0.1		7.3		1.3				

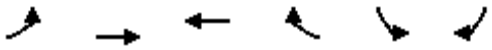
Intersection Summary												
HCM 6th Ctrl Delay			23.2									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	164	578	657	248	102	79
Future Volume (vph)	164	578	657	248	102	79
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	54.0	54.0	54.0	54.0	21.0	21.0
Total Split (%)	72.0%	72.0%	72.0%	72.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	28.0	28.0	28.0	28.0	15.5	15.5
Actuated g/C Ratio	0.50	0.50	0.50	0.50	0.28	0.28
v/c Ratio	0.91	0.67	0.77	0.29	0.23	0.17
Control Delay	60.6	13.7	16.6	1.7	20.8	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	13.7	16.6	1.7	20.8	7.0
LOS	E	B	B	A	C	A
Approach Delay		24.1	12.5		14.7	
Approach LOS		C	B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 55.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 32: Walt Stephens Rd & *proposed* Reeves Creek Pkwy

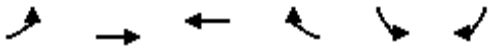




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	182	642	730	276	113	88
v/c Ratio	0.91	0.67	0.77	0.29	0.23	0.17
Control Delay	60.6	13.7	16.6	1.7	20.8	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	13.7	16.6	1.7	20.8	7.0
Queue Length 50th (ft)	49	142	173	0	28	0
Queue Length 95th (ft)	#171	221	271	23	86	34
Internal Link Dist (ft)		4110	2177		821	
Turn Bay Length (ft)						
Base Capacity (vph)	346	1647	1647	1437	500	511
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.39	0.44	0.19	0.23	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	164	578	657	248	102	79
Future Volume (veh/h)	164	578	657	248	102	79
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	182	642	730	276	113	88
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	316	1168	1168	990	387	345
Arrive On Green	0.61	0.61	0.61	0.61	0.21	0.21
Sat Flow, veh/h	569	1900	1900	1610	1810	1610
Grp Volume(v), veh/h	182	642	730	276	113	88
Grp Sat Flow(s),veh/h/ln	569	1900	1900	1610	1810	1610
Q Serve(g_s), s	20.6	13.8	16.8	5.6	3.7	3.2
Cycle Q Clear(g_c), s	37.5	13.8	16.8	5.6	3.7	3.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	316	1168	1168	990	387	345
V/C Ratio(X)	0.58	0.55	0.62	0.28	0.29	0.26
Avail Cap(c_a), veh/h	356	1301	1301	1102	387	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	7.9	8.4	6.3	23.1	22.9
Incr Delay (d2), s/veh	1.8	0.4	0.8	0.2	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.9	4.9	1.3	1.6	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.0	8.3	9.2	6.4	25.0	24.7
LnGrp LOS	C	A	A	A	C	C
Approach Vol, veh/h		824	1006		201	
Approach Delay, s/veh		11.3	8.5		24.9	
Approach LOS		B	A		C	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	49.1	21.0	49.1
Change Period (Y+Rc), s	6.0	6.0	6.0
Max Green Setting (Gmax), s	48.0	15.0	48.0
Max Q Clear Time (g_c+I1), s	39.5	5.7	18.8
Green Ext Time (p_c), s	3.6	0.4	6.2

Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	48	27	0	4	18	602	10	2	522	23
Future Vol, veh/h	61	0	48	27	0	4	18	602	10	2	522	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	0	53	30	0	4	20	669	11	2	580	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1301	1304	580	1333	1319	669	606	0	0	680	0	0
Stage 1	584	584	-	709	709	-	-	-	-	-	-	-
Stage 2	717	720	-	624	610	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	139	162	518	132	158	461	982	-	-	922	-	-
Stage 1	501	501	-	428	440	-	-	-	-	-	-	-
Stage 2	424	435	-	477	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	135	158	518	116	154	461	982	-	-	922	-	-
Mov Cap-2 Maneuver	135	158	-	116	154	-	-	-	-	-	-	-
Stage 1	491	499	-	419	431	-	-	-	-	-	-	-
Stage 2	411	426	-	427	487	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.3	43.2	0.2	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	982	-	-	200	128	922	-	-
HCM Lane V/C Ratio	0.02	-	-	0.606	0.269	0.002	-	-
HCM Control Delay (s)	8.7	-	-	47.3	43.2	8.9	0	-
HCM Lane LOS	A	-	-	E	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.4	1	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1129	816	291	631	491	436
Future Volume (vph)	1129	816	291	631	491	436
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.1	59.1	88.7	87.5	48.1	48.1
Actuated g/C Ratio	0.39	0.39	0.59	0.58	0.32	0.32
v/c Ratio	1.07	0.90	1.17	0.38	1.15	0.76
Control Delay	90.8	19.1	150.1	17.6	136.1	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.8	19.1	150.1	17.6	136.1	24.0
LOS	F	B	F	B	F	C
Approach Delay	60.7			59.4	83.4	
Approach LOS	E			E	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 65.9	Intersection LOS: E
Intersection Capacity Utilization 91.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1227	887	316	686	534	474
v/c Ratio	1.07	0.90	1.17	0.38	1.15	0.76
Control Delay	90.8	19.1	150.1	17.6	136.1	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.8	19.1	150.1	17.6	136.1	24.0
Queue Length 50th (ft)	~697	101	~322	182	~614	152
Queue Length 95th (ft)	#837	#568	#522	226	#845	310
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1146	984	270	1784	463	624
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.90	1.17	0.38	1.15	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1129	816	291	631	491	436
Future Volume (veh/h)	1129	816	291	631	491	436
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1227	887	316	686	534	474
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1156	516	279	1810	467	416
Arrive On Green	0.39	0.39	0.15	0.58	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	1227	887	316	686	534	474
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	59.1	59.1	22.3	17.7	48.1	48.1
Cycle Q Clear(g_c), s	59.1	59.1	22.3	17.7	48.1	48.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1156	516	279	1810	467	416
V/C Ratio(X)	1.06	1.72	1.13	0.38	1.14	1.14
Avail Cap(c_a), veh/h	1156	516	279	1810	467	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	45.4	50.5	16.7	50.9	51.0
Incr Delay (d2), s/veh	44.4	332.2	94.1	0.6	87.2	88.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.4	65.7	17.7	6.2	28.0	39.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	89.8	377.7	144.6	17.3	138.1	139.3
LnGrp LOS	F	F	F	B	F	F
Approach Vol, veh/h	2114			1002	1008	
Approach Delay, s/veh	210.6			57.5	138.7	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.8		55.2	28.4	66.4
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		19.7		50.1	24.3	61.1
Green Ext Time (p_c), s		10.8		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	155.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1740	311	326	1060	336	462
Future Volume (vph)	1740	311	326	1060	336	462
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.9	83.9	107.0	106.9	30.1	30.1
Actuated g/C Ratio	0.56	0.56	0.71	0.71	0.20	0.20
v/c Ratio	1.10	0.32	1.37	0.53	0.99	1.02
Control Delay	77.8	3.6	225.1	11.1	103.2	80.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.8	3.6	225.1	11.1	103.2	80.8
LOS	E	A	F	B	F	F
Approach Delay	66.6			61.5	90.3	
Approach LOS	E			E	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 69.4	Intersection LOS: E
Intersection Capacity Utilization 100.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1813	324	340	1104	350	481
v/c Ratio	1.10	0.32	1.37	0.53	0.99	1.02
Control Delay	77.8	3.6	225.1	11.1	103.2	80.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.8	3.6	225.1	11.1	103.2	80.8
Queue Length 50th (ft)	~1052	0	~388	241	345	~335
Queue Length 95th (ft)	#1193	m65	#593	291	#555	#563
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1641	1028	249	2074	355	472
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.32	1.37	0.53	0.99	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1740	311	326	1060	336	462
Future Volume (veh/h)	1740	311	326	1060	336	462
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1812	324	340	1104	350	481
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1657	887	355	2091	357	318
Arrive On Green	1.00	1.00	0.11	0.71	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	1812	324	340	1104	350	481
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	0.0	0.0	15.4	26.0	29.3	30.1
Cycle Q Clear(g_c), s	0.0	0.0	15.4	26.0	29.3	30.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1657	887	355	2091	357	318
V/C Ratio(X)	1.09	0.37	0.96	0.53	0.98	1.51
Avail Cap(c_a), veh/h	1657	887	355	2091	357	318
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	28.1	9.9	59.6	59.9
Incr Delay (d2), s/veh	47.6	0.6	36.2	1.0	42.0	246.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.1	9.2	7.7	17.3	45.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.6	0.6	64.3	10.9	101.6	306.1
LnGrp LOS	F	A	E	B	F	F
Approach Vol, veh/h	2136			1444	831	
Approach Delay, s/veh	40.5			23.5	220.0	
Approach LOS	D			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	23.0	90.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		28.0		32.1	17.4	2.0
Green Ext Time (p_c), s		31.6		0.0	0.0	64.1

Intersection Summary	
HCM 6th Ctrl Delay	68.7
HCM 6th LOS	E

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	2052	10	1372	26	16
Future Volume (vph)	2052	10	1372	26	16
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	136.0	136.0	136.0	14.0	14.0
Total Split (%)	90.7%	90.7%	90.7%	9.3%	9.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	133.9	133.9	133.9	7.3	7.3
Actuated g/C Ratio	0.89	0.89	0.89	0.05	0.05
v/c Ratio	0.81	0.08	0.53	0.31	0.17
Control Delay	10.8	2.8	3.9	78.3	30.8
Queue Delay	28.4	0.0	0.2	3.6	0.0
Total Delay	39.2	2.8	4.0	81.8	30.8
LOS	D	A	A	F	C
Approach Delay	39.2		4.0	62.9	
Approach LOS	D		A	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 90 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2118	10	1400	27	16
v/c Ratio	0.81	0.08	0.53	0.31	0.17
Control Delay	10.8	2.8	3.9	78.3	30.8
Queue Delay	28.4	0.0	0.2	3.6	0.0
Total Delay	39.2	2.8	4.0	81.8	30.8
Queue Length 50th (ft)	66	1	121	26	0
Queue Length 95th (ft)	m763	m2	m361	61	26
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2617	125	2622	96	101
Starvation Cap Reductn	610	0	0	0	0
Spillback Cap Reductn	0	0	410	31	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.06	0.08	0.63	0.42	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2052	24	10	1372	26	16
Future Volume (veh/h)	2052	24	10	1372	26	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	2094	24	10	1400	27	16
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2669	31	219	2635	49	44
Arrive On Green	1.00	1.00	1.00	1.00	0.03	0.03
Sat Flow, veh/h	3078	34	192	3040	1781	1585
Grp Volume(v), veh/h	1032	1086	10	1400	27	16
Grp Sat Flow(s),veh/h/ln	1481	1553	192	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.2	1.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	2.2	1.5
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1318	1381	219	2635	49	44
V/C Ratio(X)	0.78	0.79	0.05	0.53	0.55	0.36
Avail Cap(c_a), veh/h	1318	1381	219	2635	95	85
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.72	0.72	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	72.0	71.6
Incr Delay (d2), s/veh	0.4	0.4	0.3	0.6	9.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.2	1.2	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.4	0.4	0.3	0.6	81.0	76.6
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	2118			1410	43	
Approach Delay, s/veh	0.4			0.6	79.4	
Approach LOS	A			A	E	

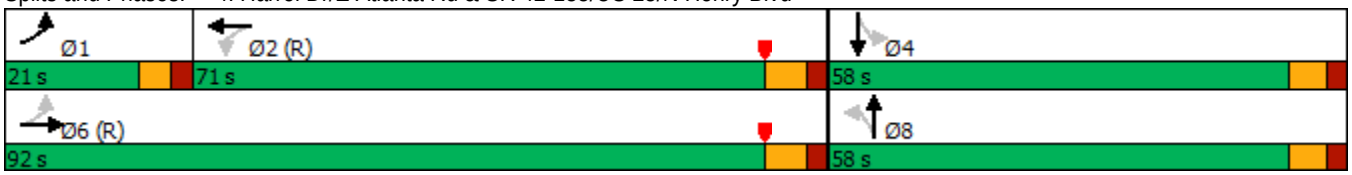
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		139.8		10.2		139.8
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		129.6		8.0		129.6
Max Q Clear Time (g_c+I1), s		2.0		4.2		2.0
Green Ext Time (p_c), s		46.4		0.0		102.5

Intersection Summary	
HCM 6th Ctrl Delay	1.4
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	342	1642	16	1099	27	37	351	5
Future Volume (vph)	342	1642	16	1099	27	37	351	5
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	21.0	92.0	71.0	71.0	58.0	58.0	58.0	58.0
Total Split (%)	14.0%	61.3%	47.3%	47.3%	38.7%	38.7%	38.7%	38.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	86.0	84.9	63.9	63.9		51.3		51.3
Actuated g/C Ratio	0.57	0.57	0.43	0.43		0.34		0.34
v/c Ratio	1.80	1.03	0.35	1.19		0.27		1.36
Control Delay	392.5	32.1	48.7	125.1		32.7		211.2
Queue Delay	0.0	27.8	0.0	0.0		0.0		0.3
Total Delay	392.5	59.9	48.7	125.1		32.8		211.5
LOS	F	E	D	F		C		F
Approach Delay		116.9		124.3		32.8		211.5
Approach LOS		F		F		C		F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 146 (97%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.80	
Intersection Signal Delay: 130.0	Intersection LOS: F
Intersection Capacity Utilization 115.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





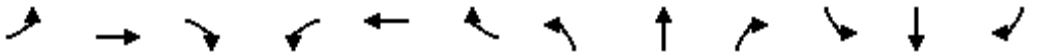
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	356	1724	17	1460	142	606
v/c Ratio	1.80	1.03	0.35	1.19	0.27	1.36
Control Delay	392.5	32.1	48.7	125.1	32.7	211.2
Queue Delay	0.0	27.8	0.0	0.0	0.0	0.3
Total Delay	392.5	59.9	48.7	125.1	32.8	211.5
Queue Length 50th (ft)	~476	~938	7	~904	87	~764
Queue Length 95th (ft)	m#336	m334	m25	#1023	146	#1007
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	198	1673	49	1226	524	447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	183	0	0	16	14
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.80	1.16	0.35	1.19	0.28	1.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1642	13	16	1099	302	27	37	72	351	5	226
Future Volume (veh/h)	342	1642	13	16	1099	302	27	37	72	351	5	226
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	1710	14	17	1145	315	28	39	75	366	5	235
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	205	1721	14	50	981	267	123	175	301	315	4	177
Arrive On Green	0.10	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1570	3040	25	282	2302	626	275	510	879	808	11	519
Grp Volume(v), veh/h	356	840	884	17	732	728	142	0	0	606	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1569	282	1481	1446	1664	0	0	1337	0	0
Q Serve(g_s), s	15.0	83.5	83.9	1.0	63.9	63.9	0.0	0.0	0.0	42.3	0.0	0.0
Cycle Q Clear(g_c), s	15.0	83.5	83.9	63.9	63.9	63.9	9.0	0.0	0.0	51.3	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.43	0.20		0.53	0.60		0.39
Lane Grp Cap(c), veh/h	205	846	888	50	631	616	598	0	0	496	0	0
V/C Ratio(X)	1.74	0.99	0.99	0.34	1.16	1.18	0.24	0.00	0.00	1.22	0.00	0.00
Avail Cap(c_a), veh/h	205	846	888	50	631	616	598	0	0	496	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.83	0.83	0.83	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.6	32.3	32.3	64.4	32.5	32.5	35.4	0.0	0.0	52.1	0.0	0.0
Incr Delay (d2), s/veh	333.5	7.8	7.9	14.7	86.3	95.2	0.2	0.0	0.0	117.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.8	30.5	32.2	0.8	35.4	36.1	3.9	0.0	0.0	35.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	383.0	40.1	40.2	79.1	118.9	127.7	35.6	0.0	0.0	169.0	0.0	0.0
LnGrp LOS	F	D	D	E	F	F	D	A	A	F	A	A
Approach Vol, veh/h		2080			1477			142			606	
Approach Delay, s/veh		98.8			122.8			35.6			169.0	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	21.0	71.0		58.0		92.0		58.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	15.0	63.9		51.3		84.9		51.3				
Max Q Clear Time (g_c+I1), s	17.0	65.9		53.3		85.9		11.0				
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0		1.0				

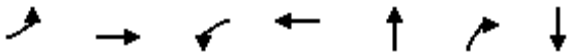
Intersection Summary												
HCM 6th Ctrl Delay			114.8									
HCM 6th LOS			F									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	27	1890	306	1188	236	55	308	13	54
Future Volume (vph)	27	1890	306	1188	236	55	308	13	54
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.5	94.3	114.0	106.2		22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.76	0.71		0.15	0.15		0.15
v/c Ratio	0.09	1.31	1.52	0.59		1.61	0.95		0.80
Control Delay	5.5	171.9	270.7	7.3		334.9	77.5		94.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.5	171.9	270.7	7.3		334.9	77.5		94.1
LOS	A	F	F	A		F	E		F
Approach Delay		170.0		60.6		202.6			94.1
Approach LOS		F		E		F			F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.61	
Intersection Signal Delay: 136.2	Intersection LOS: F
Intersection Capacity Utilization 121.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





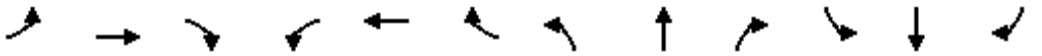
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	28	2338	312	1230	297	314	98
v/c Ratio	0.09	1.31	1.52	0.59	1.61	0.95	0.80
Control Delay	5.5	171.9	270.7	7.3	334.9	77.5	94.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	171.9	270.7	7.3	334.9	77.5	94.1
Queue Length 50th (ft)	6	~1547	~379	174	~414	208	83
Queue Length 95th (ft)	14	#1673	m#299	m143	#607	#400	#190
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	318	1780	205	2090	185	332	123
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	1.31	1.52	0.59	1.61	0.95	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1890	401	306	1188	18	236	55	308	13	54	29
Future Volume (veh/h)	27	1890	401	306	1188	18	236	55	308	13	54	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1929	409	312	1212	18	241	56	314	13	55	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	316	1510	309	204	2083	31	104	14	239	27	86	38
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2402	492	1795	3016	45	399	93	1585	0	569	251
Grp Volume(v), veh/h	28	1139	1199	312	601	629	297	0	314	98	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1441	1795	1495	1566	492	0	1585	820	0	0
Q Serve(g_s), s	0.8	94.3	94.3	13.0	31.2	31.2	0.0	0.0	22.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	94.3	94.3	13.0	31.2	31.2	22.6	0.0	22.6	22.6	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.03	0.81		1.00	0.13		0.31
Lane Grp Cap(c), veh/h	316	913	906	204	1032	1081	118	0	239	151	0	0
V/C Ratio(X)	0.09	1.25	1.32	1.53	0.58	0.58	2.53	0.00	1.31	0.65	0.00	0.00
Avail Cap(c_a), veh/h	343	913	906	204	1032	1081	118	0	239	151	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.7	27.9	27.9	57.4	12.0	12.0	67.9	0.0	63.7	57.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	120.3	153.3	241.8	0.2	0.2	711.0	0.0	168.2	12.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	59.8	67.6	21.2	9.9	10.4	27.8	0.0	20.2	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	148.2	181.1	299.2	12.2	12.2	778.9	0.0	231.9	70.5	0.0	0.0
LnGrp LOS	B	F	F	F	B	B	F	A	F	E	A	A
Approach Vol, veh/h		2366			1542			611			98	
Approach Delay, s/veh		163.2			70.3			497.8			70.5	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	110.3		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.8	33.2		24.6	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	27.2		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		174.5	
HCM 6th LOS		F	

Intersection	
Int Delay, s/veh	25.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	4	228	25	5	35	214	1175	37	38	2026	112
Future Vol, veh/h	55	4	228	25	5	35	214	1175	37	38	2026	112
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	57	4	238	26	5	36	223	1224	39	40	2110	117

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3310	3958	1114	2807	3977	612	2227	0	0	1263	0	0
Stage 1	2249	2249	-	1670	1670	-	-	-	-	-	-	-
Stage 2	1061	1709	-	1137	2307	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	~ 3	~ 203	~ 8	~ 3	436	230	-	-	546	-	-
Stage 1	~ 43	77	-	100	151	-	-	-	-	-	-	-
Stage 2	239	145	-	215	72	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	0	~ 203	-	0	436	230	-	-	546	-	-
Mov Cap-2 Maneuver	0	0	-	-	0	-	-	-	-	-	-	-
Stage 1	~ 1	71	-	~ 3	~ 5	-	-	-	-	-	-	-
Stage 2	-	~ 4	-	-	67	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	281		14.5	0.2
HCM LOS	F	-		

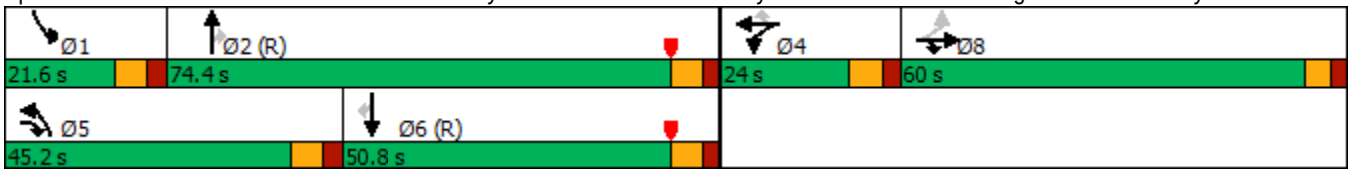
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	230	-	-	203	-	546	-	-
HCM Lane V/C Ratio	0.969	-	-	1.473	-	0.072	-	-
HCM Control Delay (s)	96.6	-	-	281	-	12.1	-	-
HCM Lane LOS	F	-	-	F	-	B	-	-
HCM 95th %tile Q(veh)	8.7	-	-	18.2	-	0.2	-	-

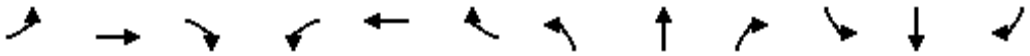
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	352	173	1336	125	172	126	775	451	71	70	739	176
Future Volume (vph)	352	173	1336	125	172	126	775	451	71	70	739	176
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	60.0	60.0		24.0	24.0	24.0	45.2	74.4	74.4	21.6	50.8	50.8
Total Split (%)	33.3%	33.3%		13.3%	13.3%	13.3%	25.1%	41.3%	41.3%	12.0%	28.2%	28.2%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	54.0	54.0	99.2	17.0	17.0	17.0	38.4	68.7	68.7	13.5	43.9	43.9
Actuated g/C Ratio	0.30	0.30	0.55	0.09	0.09	0.09	0.21	0.38	0.38	0.08	0.24	0.24
v/c Ratio	1.02	0.32	1.04	0.78	1.02	0.47	1.26	0.43	0.11	0.55	1.08	0.40
Control Delay	91.6	43.7	81.4	108.3	150.3	13.6	185.6	42.9	2.4	95.9	118.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.6	43.7	81.4	108.3	150.3	13.6	185.6	42.9	2.4	95.9	118.2	9.1
LOS	F	D	F	F	F	B	F	D	A	F	F	A
Approach Delay		79.8			97.2			125.9			97.2	
Approach LOS		E			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 98.3	Intersection LOS: F
Intersection Capacity Utilization 93.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





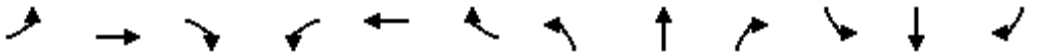
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	367	180	1392	130	179	131	807	470	74	73	770	183
v/c Ratio	1.02	0.32	1.04	0.78	1.02	0.47	1.26	0.43	0.11	0.55	1.08	0.40
Control Delay	91.6	43.7	81.4	108.3	150.3	13.6	185.6	42.9	2.4	95.9	118.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.6	43.7	81.4	108.3	150.3	13.6	185.6	42.9	2.4	95.9	118.2	9.1
Queue Length 50th (ft)	~461	172	~999	153	~223	0	~614	218	0	84	~530	0
Queue Length 95th (ft)	m#545	m185	m#1142	#268	#394	57	#749	274	16	145	#667	71
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	360	558	1338	167	175	279	638	1102	667	144	715	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.32	1.04	0.78	1.02	0.47	1.26	0.43	0.11	0.51	1.08	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	173	1336	125	172	126	775	451	71	70	739	176
Future Volume (veh/h)	352	173	1336	125	172	126	775	451	71	70	739	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	367	180	1392	130	179	131	807	470	74	73	770	183
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.21	0.41	0.41	0.05	0.24	0.24
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	367	180	1392	130	179	131	807	470	74	73	770	183
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	35.9	16.1	54.0	12.8	17.0	14.7	38.4	20.6	5.2	7.3	43.9	21.9
Cycle Q Clear(g_c), s	35.9	16.1	54.0	12.8	17.0	14.7	38.4	20.6	5.2	7.3	43.9	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
V/C Ratio(X)	0.69	0.32	1.10	0.77	1.01	0.88	1.24	0.40	0.12	0.80	1.07	0.57
Avail Cap(c_a), veh/h	534	561	1262	168	177	150	650	1179	643	145	722	322
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.26	0.26	0.26	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	64.0	50.9	79.6	81.5	80.5	70.8	37.9	33.4	84.5	68.1	59.7
Incr Delay (d2), s/veh	1.0	0.1	50.1	20.2	71.2	40.1	121.8	1.0	0.4	34.6	52.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	8.2	31.8	6.9	11.8	7.6	25.7	7.5	2.1	4.2	21.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	64.1	101.0	99.8	152.7	120.5	192.6	38.9	33.7	119.1	120.4	66.8
LnGrp LOS	E	E	F	F	F	F	F	D	C	F	F	E
Approach Vol, veh/h		1939			440			1351			1026	
Approach Delay, s/veh		92.4			127.5			130.4			110.8	
Approach LOS		F			F			F			F	

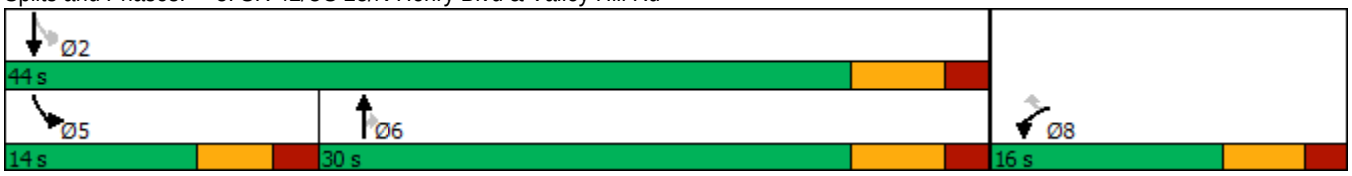
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	79.9		24.0	45.2	50.8		60.0				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	14.7	67.5		17.0	38.4	43.9		54.0				
Max Q Clear Time (g_c+I1), s	9.3	22.6		19.0	40.4	45.9		56.0				
Green Ext Time (p_c), s	0.1	7.2		0.0	0.0	0.0		0.0				

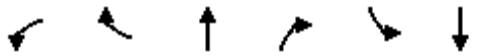
Intersection Summary			
HCM 6th Ctrl Delay		110.4	
HCM 6th LOS		F	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	166	119	673	171	282	979
Future Volume (vph)	166	119	673	171	282	979
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	30.0	30.0	14.0	44.0
Total Split (%)	26.7%	26.7%	50.0%	50.0%	23.3%	73.3%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.7	10.7	20.9	20.9	36.2	37.3
Actuated g/C Ratio	0.20	0.20	0.39	0.39	0.68	0.70
v/c Ratio	0.48	0.29	0.60	0.24	0.52	0.49
Control Delay	27.4	7.5	16.5	3.4	8.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	7.5	16.5	3.4	8.0	6.7
LOS	C	A	B	A	A	A
Approach Delay	19.1		13.9			7.0
Approach LOS	B		B			A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	169	121	687	174	288	999
v/c Ratio	0.48	0.29	0.60	0.24	0.52	0.49
Control Delay	27.4	7.5	16.5	3.4	8.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	7.5	16.5	3.4	8.0	6.7
Queue Length 50th (ft)	53	0	98	0	37	89
Queue Length 95th (ft)	110	37	147	31	65	131
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	359	417	1364	829	560	2111
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.29	0.50	0.21	0.51	0.47

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	166	119	673	171	282	979
Future Volume (veh/h)	166	119	673	171	282	979
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	169	0	687	174	288	999
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	309		1039	556	502	1785
Arrive On Green	0.17	0.00	0.35	0.35	0.15	0.60
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	169	0	687	174	288	999
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	4.6	0.0	10.3	4.2	4.7	10.7
Cycle Q Clear(g_c), s	4.6	0.0	10.3	4.2	4.7	10.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	309		1039	556	502	1785
V/C Ratio(X)	0.55		0.66	0.31	0.57	0.56
Avail Cap(c_a), veh/h	351		1337	715	526	2123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	14.5	12.5	9.3	6.3
Incr Delay (d2), s/veh	1.5	0.0	1.6	0.7	1.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	2.9	1.3	1.3	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.4	0.0	16.1	13.2	10.7	6.9
LnGrp LOS	C		B	B	B	A
Approach Vol, veh/h	169	A	861			1287
Approach Delay, s/veh	21.4		15.5			7.7
Approach LOS	C		B			A

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		38.0			13.3	24.7	14.8
Change Period (Y+Rc), s		6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s		37.8			8.6	23.8	10.4
Max Q Clear Time (g_c+I1), s		12.7			6.7	12.3	6.6
Green Ext Time (p_c), s		12.9			0.2	6.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

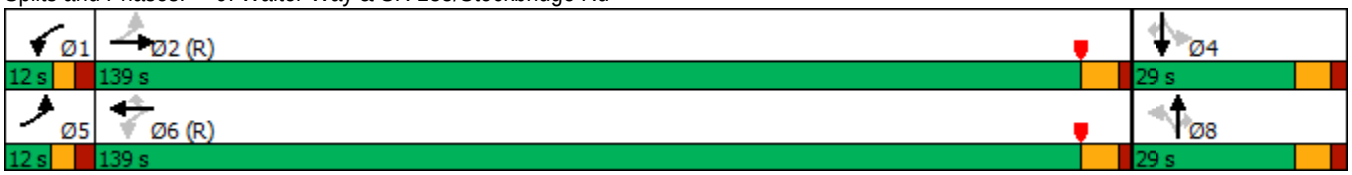
Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	1935	118	1169	25	87	5	184	10	7	24
Future Volume (vph)	23	1935	118	1169	25	87	5	184	10	7	24
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	12.0	139.0	12.0	139.0	139.0	29.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	6.7%	77.2%	6.7%	77.2%	77.2%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	139.8	132.7	145.9	140.7	140.7		18.2	18.2		18.2	18.2
Actuated g/C Ratio	0.78	0.74	0.81	0.78	0.78		0.10	0.10		0.10	0.10
v/c Ratio	0.07	0.93	0.82	0.51	0.02		0.71	0.86		0.12	0.12
Control Delay	1.9	10.5	79.4	6.9	0.0		104.8	81.2		73.2	1.1
Queue Delay	0.0	9.4	0.0	0.4	0.0		0.0	0.0		0.0	0.0
Total Delay	1.9	19.9	79.4	7.3	0.0		104.8	81.2		73.2	1.1
LOS	A	B	E	A	A		F	F		E	A
Approach Delay		19.7		13.6			89.1			31.3	
Approach LOS		B		B			F			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 171 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 91.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd



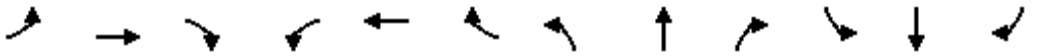


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	2112	124	1231	26	97	194	18	25
v/c Ratio	0.07	0.93	0.82	0.51	0.02	0.71	0.86	0.12	0.12
Control Delay	1.9	10.5	79.4	6.9	0.0	104.8	81.2	73.2	1.1
Queue Delay	0.0	9.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	19.9	79.4	7.3	0.0	104.8	81.2	73.2	1.1
Queue Length 50th (ft)	2	177	79	592	0	112	144	20	0
Queue Length 95th (ft)	m3	108	m#91	m515	m0	181	#257	48	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	349	2265	152	2411	1250	164	256	180	243
Starvation Cap Reductn	0	167	0	607	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.01	0.82	0.68	0.02	0.59	0.76	0.10	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1935	71	118	1169	25	87	5	184	10	7	24
Future Volume (veh/h)	23	1935	71	118	1169	25	87	5	184	10	7	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	2037	75	124	1231	26	92	5	194	11	7	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	407	2268	83	241	2335	1182	39	0	193	32	13	193
Arrive On Green	0.05	1.00	1.00	0.04	0.99	0.99	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3081	113	1781	3131	1585	0	0	1585	0	109	1585
Grp Volume(v), veh/h	24	1029	1083	124	1231	26	97	0	194	18	0	25
Grp Sat Flow(s),veh/h/ln	1781	1566	1628	1781	1566	1585	0	0	1585	109	0	1585
Q Serve(g_s), s	0.6	0.0	0.0	3.1	1.2	0.0	0.0	0.0	21.9	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	3.1	1.2	0.0	21.9	0.0	21.9	21.9	0.0	2.5
Prop In Lane	1.00		0.07	1.00		1.00	0.95		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	407	1153	1198	241	2335	1182	39	0	193	45	0	193
V/C Ratio(X)	0.06	0.89	0.90	0.51	0.53	0.02	2.49	0.00	1.01	0.40	0.00	0.13
Avail Cap(c_a), veh/h	426	1153	1198	244	2335	1182	39	0	193	45	0	193
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.29	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	5.1	0.2	0.2	90.0	0.0	79.1	74.4	0.0	70.5
Incr Delay (d2), s/veh	0.0	3.5	3.8	0.2	0.1	0.0	740.0	0.0	66.4	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.1	1.3	1.1	0.2	0.0	9.8	0.0	12.5	0.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	3.5	3.8	5.3	0.3	0.2	830.0	0.0	145.4	79.9	0.0	70.8
LnGrp LOS	A	A	A	A	A	A	F	A	F	E	A	E
Approach Vol, veh/h		2136			1381			291			43	
Approach Delay, s/veh		3.7			0.7			373.6			74.6	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	139.3		29.0	10.0	141.0		29.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 6.3	* 1.3E2		21.9	* 6.2	* 1.3E2		21.9				
Max Q Clear Time (g_c+I1), s	5.1	2.0		23.9	2.6	3.2		23.9				
Green Ext Time (p_c), s	0.0	99.1		0.0	0.0	31.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.4	
HCM 6th LOS		C	

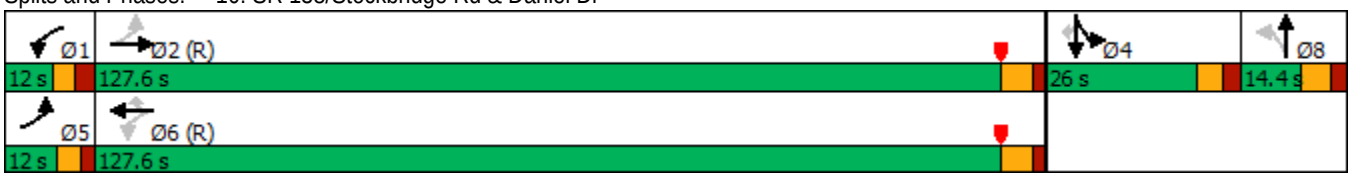
Notes

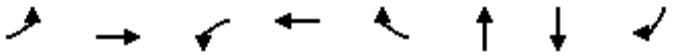
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	122	1903	9	1203	96	11	4	5	155
Future Volume (vph)	122	1903	9	1203	96	11	4	5	155
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	12.0	127.6	12.0	127.6	127.6	14.4	14.4	26.0	26.0
Total Split (%)	6.7%	70.9%	6.7%	70.9%	70.9%	8.0%	8.0%	14.4%	14.4%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	140.1	136.0	135.5	128.7	128.7		8.0	18.5	18.5
Actuated g/C Ratio	0.78	0.76	0.75	0.72	0.72		0.04	0.10	0.10
v/c Ratio	0.39	0.91	0.07	0.56	0.08		0.35	0.83	0.55
Control Delay	6.7	26.1	3.1	5.2	0.2		71.2	112.0	23.2
Queue Delay	0.0	46.8	0.0	0.2	0.0		0.0	0.0	0.3
Total Delay	6.7	72.9	3.1	5.4	0.2		71.2	112.0	23.5
LOS	A	E	A	A	A		E	F	C
Approach Delay		69.0		5.0			71.2	66.8	
Approach LOS		E		A			E	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 159 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 46.1	Intersection LOS: D
Intersection Capacity Utilization 88.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr



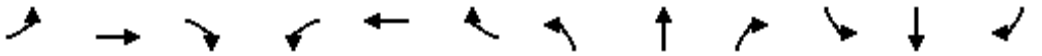


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	124	1971	9	1228	98	25	151	158
v/c Ratio	0.39	0.91	0.07	0.56	0.08	0.35	0.83	0.55
Control Delay	6.7	26.1	3.1	5.2	0.2	71.2	112.0	23.2
Queue Delay	0.0	46.8	0.0	0.2	0.0	0.0	0.0	0.3
Total Delay	6.7	72.9	3.1	5.4	0.2	71.2	112.0	23.5
Queue Length 50th (ft)	7	565	1	98	1	18	177	23
Queue Length 95th (ft)	m3	m36	m2	103	0	55	#289	103
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	315	2160	141	2205	1159	71	197	297
Starvation Cap Reductn	0	876	0	112	0	0	0	0
Spillback Cap Reductn	0	44	0	263	0	0	0	11
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	1.54	0.06	0.63	0.08	0.35	0.77	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1903	28	9	1203	96	11	4	10	143	5	155
Future Volume (veh/h)	122	1903	28	9	1203	96	11	4	10	143	5	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	1942	29	9	1228	98	11	4	10	146	5	158
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	386	2068	31	215	2173	1100	24	9	22	189	6	174
Arrive On Green	0.07	1.00	1.00	0.02	1.00	1.00	0.03	0.03	0.03	0.11	0.11	0.11
Sat Flow, veh/h	1781	2903	43	1781	3131	1585	752	274	684	1725	59	1585
Grp Volume(v), veh/h	124	960	1011	9	1228	98	25	0	0	151	0	158
Grp Sat Flow(s),veh/h/ln	1781	1439	1507	1781	1566	1585	1710	0	0	1784	0	1585
Q Serve(g_s), s	3.8	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	14.8	0.0	17.7
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	14.8	0.0	17.7
Prop In Lane	1.00		0.03	1.00		1.00	0.44		0.40	0.97		1.00
Lane Grp Cap(c), veh/h	386	1025	1074	215	2173	1100	54	0	0	196	0	174
V/C Ratio(X)	0.32	0.94	0.94	0.04	0.57	0.09	0.46	0.00	0.00	0.77	0.00	0.91
Avail Cap(c_a), veh/h	396	1025	1074	258	2173	1100	77	0	0	198	0	176
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.86	0.86	0.86	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	7.7	0.0	0.0	85.6	0.0	0.0	77.9	0.0	79.2
Incr Delay (d2), s/veh	0.0	2.2	2.2	0.1	0.9	0.1	6.0	0.0	0.0	16.6	0.0	42.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.6	0.7	0.1	0.3	0.0	1.3	0.0	0.0	7.8	0.0	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	2.2	2.2	7.8	0.9	0.1	91.6	0.0	0.0	94.5	0.0	121.4
LnGrp LOS	A	A	A	A	A	A	F	A	A	F	A	F
Approach Vol, veh/h		2095			1335			25			309	
Approach Delay, s/veh		2.5			0.9			91.6			108.3	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	134.5		25.8	11.0	131.2		12.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 1.2E2		20.0	7.0	* 1.2E2		8.1				
Max Q Clear Time (g_c+I1), s	2.3	2.0		19.7	5.8	2.0		4.6				
Green Ext Time (p_c), s	0.0	83.1		0.0	0.0	32.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		11.2	
HCM 6th LOS		B	

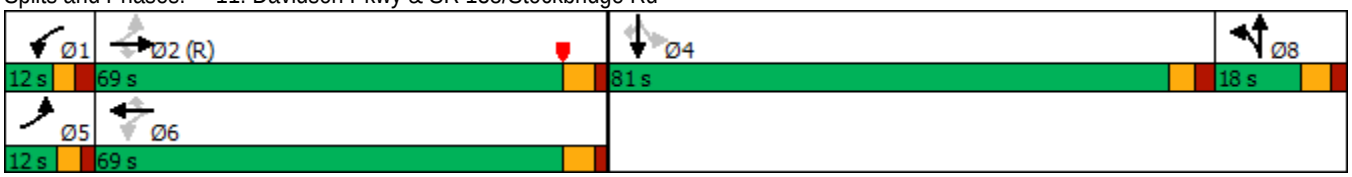
Notes

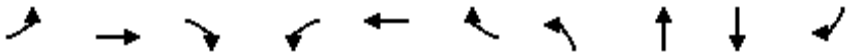
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	1885	979	57	1215	61	1098	28	70	27	188
Future Volume (vph)	165	1885	979	57	1215	61	1098	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	18.0	18.0	81.0	81.0	81.0
Total Split (%)	6.7%	38.3%	38.3%	6.7%	38.3%	38.3%	10.0%	10.0%	45.0%	45.0%	45.0%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	71.0	62.7	62.7	70.0	62.7	62.7	11.7	11.7		75.0	75.0
Actuated g/C Ratio	0.39	0.35	0.35	0.39	0.35	0.35	0.06	0.06		0.42	0.42
v/c Ratio	1.55	1.97	1.46	0.56	1.27	0.10	5.88	5.67		2.10	0.27
Control Delay	280.6	465.0	234.7	60.7	161.8	3.5	2226.9	2130.8		586.8	18.6
Queue Delay	0.0	0.8	1.0	0.0	1.6	0.0	7.0	6.7		17.6	0.0
Total Delay	280.6	465.9	235.8	60.7	163.4	3.5	2233.9	2137.5		604.4	18.6
LOS	F	F	F	E	F	A	F	F		F	B
Approach Delay		381.4			151.7			2186.2		217.9	
Approach LOS		F			F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 96 (53%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 5.88	
Intersection Signal Delay: 696.3	Intersection LOS: F
Intersection Capacity Utilization 117.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	172	1964	1020	59	1266	64	641	629	101	196
v/c Ratio	1.55	1.97	1.46	0.56	1.27	0.10	5.88	5.67	2.10	0.27
Control Delay	280.6	465.0	234.7	60.7	161.8	3.5	2226.9	2130.8	586.8	18.6
Queue Delay	0.0	0.8	1.0	0.0	1.6	0.0	7.0	6.7	17.6	0.0
Total Delay	280.6	465.9	235.8	60.7	163.4	3.5	2233.9	2137.5	604.4	18.6
Queue Length 50th (ft)	~234	~1897	~1581	31	~971	2	~1509	~1485	~187	76
Queue Length 95th (ft)	m#151	m#1409	m#974	87	#1118	16	#1774	#1755	#272	141
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	111	998	701	105	997	610	109	111	48	713
Starvation Cap Reductn	0	116	97	0	0	0	0	0	0	0
Spillback Cap Reductn	0	148	0	0	250	0	27	27	17	15
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.55	2.31	1.69	0.56	1.69	0.10	7.82	7.49	3.26	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1885	979	57	1215	61	1098	28	93	70	27	188
Future Volume (veh/h)	165	1885	979	57	1215	61	1098	28	93	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	1964	0	59	1266	64	1255	0	0	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	367	1817		96	1804	993	232	122	0	180	69	219
Arrive On Green	0.05	0.84	0.00	0.06	1.00	1.00	0.06	0.00	0.00	0.14	0.14	0.14
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1305	500	1585
Grp Volume(v), veh/h	172	1964	0	59	1266	64	1255	0	0	101	0	196
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1805	0	1585
Q Serve(g_s), s	6.6	113.6	0.0	2.1	0.0	0.0	11.7	0.0	0.0	9.2	0.0	21.9
Cycle Q Clear(g_c), s	6.6	113.6	0.0	2.1	0.0	0.0	11.7	0.0	0.0	9.2	0.0	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.72		1.00
Lane Grp Cap(c), veh/h	367	1817		96	1804	993	232	122	0	250	0	219
V/C Ratio(X)	0.47	1.08		0.61	0.70	0.06	5.42	0.00	0.00	0.40	0.00	0.89
Avail Cap(c_a), veh/h	367	1817		104	1804	993	232	122	0	752	0	660
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.81	0.81	0.81	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	14.4	0.0	44.7	0.0	0.0	84.2	0.0	0.0	70.8	0.0	76.3
Incr Delay (d2), s/veh	0.1	37.7	0.0	7.3	1.3	0.0	1998.3	0.0	0.0	1.1	0.0	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	28.1	0.0	1.8	0.3	0.0	69.7	0.0	0.0	4.4	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	52.1	0.0	52.0	1.3	0.0	2082.4	0.0	0.0	71.8	0.0	88.2
LnGrp LOS	B	F		D	A	A	F	A	A	E	A	F
Approach Vol, veh/h		2136	A		1389			1255			297	
Approach Delay, s/veh		48.8			3.4			2082.4			82.7	
Approach LOS		D			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	119.9		30.9	12.0	119.1		18.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 63		75.0	7.0	* 63		11.7				
Max Q Clear Time (g_c+I1), s	4.1	115.6		23.9	8.6	2.0		13.7				
Green Ext Time (p_c), s	0.0	0.0		1.0	0.0	28.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	541.1	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

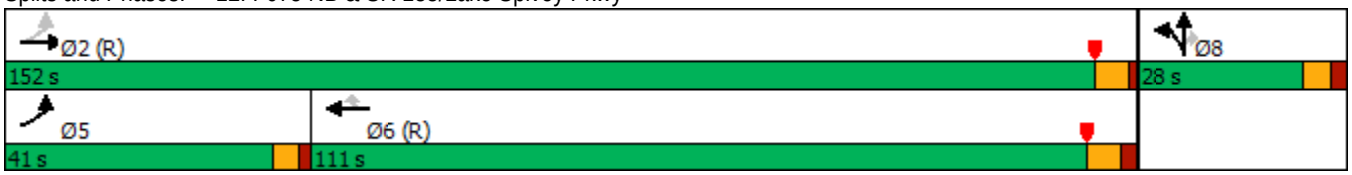
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	436	2740	2059	493	0	306
Future Volume (vph)	436	2740	2059	493	0	306
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	147.0	146.0	104.0	104.0	21.9	21.9
Actuated g/C Ratio	0.82	0.81	0.58	0.58	0.12	0.12
v/c Ratio	1.15	1.23	1.30	0.51	0.28	1.33
Control Delay	131.8	116.9	160.7	7.6	75.8	219.2
Queue Delay	0.0	3.0	1.0	6.9	0.0	2.8
Total Delay	131.8	120.0	161.7	14.5	75.8	222.0
LOS	F	F	F	B	E	F
Approach Delay		121.6	133.2		198.5	
Approach LOS		F	F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 131.1	Intersection LOS: F
Intersection Capacity Utilization 121.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





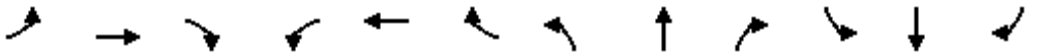
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	454	2854	2145	514	61	319
v/c Ratio	1.15	1.23	1.30	0.51	0.28	1.33
Control Delay	131.8	116.9	160.7	7.6	75.8	219.2
Queue Delay	0.0	3.0	1.0	6.9	0.0	2.8
Total Delay	131.8	120.0	161.7	14.5	75.8	222.0
Queue Length 50th (ft)	~574	~2179	~1738	262	67	~427
Queue Length 95th (ft)	m367	m324	m502	m137	119	#640
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	395	2323	1655	1014	215	240
Starvation Cap Reductn	0	188	395	444	0	0
Spillback Cap Reductn	0	1353	0	0	0	41
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.15	2.94	1.70	0.90	0.28	1.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	2740	0	0	2059	493	59	0	306	0	0	0
Future Volume (veh/h)	436	2740	0	0	2059	493	59	0	306	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	454	2854	0	0	2145	514	61	0	319			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	396	2318	0	0	1663	916	217	0	193			
Arrive On Green	0.40	1.00	0.00	0.00	0.58	0.58	0.12	0.00	0.12			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	454	2854	0	0	2145	514	61	0	319			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	36.0	0.0	0.0	0.0	104.0	36.5	5.6	0.0	21.9			
Cycle Q Clear(g_c), s	36.0	0.0	0.0	0.0	104.0	36.5	5.6	0.0	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	396	2318	0	0	1663	916	217	0	193			
V/C Ratio(X)	1.15	1.23	0.00	0.00	1.29	0.56	0.28	0.00	1.65			
Avail Cap(c_a), veh/h	396	2334	0	0	1663	916	217	0	193			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.3	0.0	0.0	0.0	38.0	23.7	71.9	0.0	79.1			
Incr Delay (d2), s/veh	68.6	104.4	0.0	0.0	130.9	0.2	0.7	0.0	316.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	20.7	33.6	0.0	0.0	64.8	13.4	2.6	0.0	25.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.0	104.4	0.0	0.0	168.9	24.0	72.6	0.0	395.4			
LnGrp LOS	F	F	A	A	F	C	E	A	F			
Approach Vol, veh/h		3308			2659			380				
Approach Delay, s/veh		106.1			140.9			343.6				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		152.0			41.0	111.0		28.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			38.0	106.0		23.9				
Green Ext Time (p_c), s		137.9			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	134.9
HCM 6th LOS	F

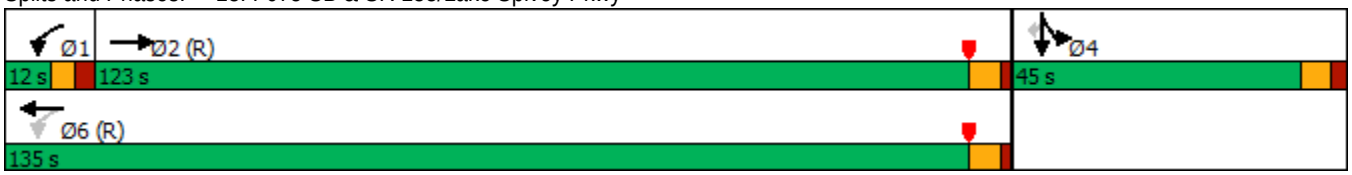
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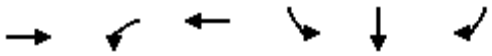
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2512	271	1845	687	0	706
Future Volume (vph)	2512	271	1845	687	0	706
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	1.43	2.76	0.93	0.99	0.99	1.22
Control Delay	220.1	817.2	23.4	112.7	112.7	170.4
Queue Delay	0.5	0.0	45.2	0.0	0.0	0.0
Total Delay	220.6	817.2	68.6	112.7	112.7	170.4
LOS	F	F	E	F	F	F
Approach Delay	220.6		164.4		141.9	
Approach LOS	F		F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.76	
Intersection Signal Delay: 183.1	Intersection LOS: F
Intersection Capacity Utilization 121.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





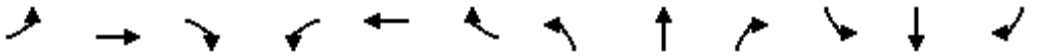
Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2663	279	1902	354	354	728
v/c Ratio	1.43	2.76	0.93	0.99	0.99	1.22
Control Delay	220.1	817.2	23.4	112.7	112.7	170.4
Queue Delay	0.5	0.0	45.2	0.0	0.0	0.0
Total Delay	220.6	817.2	68.6	112.7	112.7	170.4
Queue Length 50th (ft)	~2230	~519	397	444	444	~597
Queue Length 95th (ft)	m#2067	m#369	m231	#677	#677	#743
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1857	101	2054	359	359	596
Starvation Cap Reductn	0	0	121	0	0	0
Spillback Cap Reductn	277	0	348	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.69	2.76	1.11	0.99	0.99	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2512	71	271	1845	0	0	0	0	687	0	706
Future Volume (veh/h)	0	2512	71	271	1845	0	0	0	0	687	0	706
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2590	73	279	1902	0				708	0	728
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1860	52	100	2064	0				762	0	678
Arrive On Green	0.00	0.65	0.65	0.07	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2935	80	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1297	1366	279	1902	0				708	0	728
Grp Sat Flow(s),veh/h/ln	0	1439	1500	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	117.1	117.1	6.1	0.0	0.0				35.1	0.0	38.5
Cycle Q Clear(g_c), s	0.0	117.1	117.1	6.1	0.0	0.0				35.1	0.0	38.5
Prop In Lane	0.00		0.05	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	936	976	100	2064	0				762	0	678
V/C Ratio(X)	0.00	1.39	1.40	2.78	0.92	0.00				0.93	0.00	1.07
Avail Cap(c_a), veh/h	0	936	976	100	2064	0				762	0	678
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.5	31.5	60.8	0.0	0.0				69.4	0.0	70.8
Incr Delay (d2), s/veh	0.0	174.3	180.2	803.4	0.9	0.0				17.8	0.0	56.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	82.6	87.7	25.3	0.3	0.0				17.7	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	205.7	211.7	864.3	0.9	0.0				87.2	0.0	126.8
LnGrp LOS	A	F	F	F	A	A				F	A	F
Approach Vol, veh/h		2663			2181						1436	
Approach Delay, s/veh		208.8			111.3						107.3	
Approach LOS		F			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	8.1	119.1		40.5		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		78.8

Intersection Summary		
HCM 6th Ctrl Delay		151.7
HCM 6th LOS		F

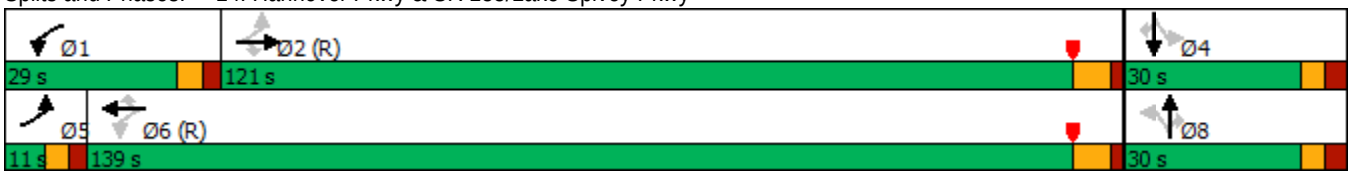
Notes

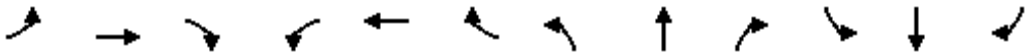
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	2228	47	197	2183	95	65	23	197	85	17	46
Future Volume (vph)	45	2228	47	197	2183	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.9	123.3	123.3	150.0	140.2	140.2	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.45	1.06	0.04	0.86	0.91	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	19.5	46.0	0.0	59.1	19.1	3.6	88.6	73.4	35.9	100.2	72.5	1.9
Queue Delay	0.0	17.0	0.0	0.0	45.4	0.0	0.0	0.0	56.5	40.9	0.0	0.0
Total Delay	19.5	63.0	0.0	59.1	64.4	3.6	88.6	73.4	92.4	141.1	72.5	1.9
LOS	B	E	A	E	E	A	F	E	F	F	E	A
Approach Delay		60.9			61.7			90.0			90.0	
Approach LOS		E			E			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 63.7	Intersection LOS: E
Intersection Capacity Utilization 100.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





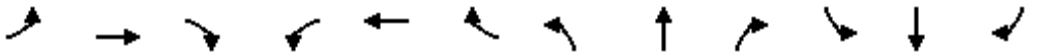
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2321	49	205	2274	99	68	24	205	89	18	48
v/c Ratio	0.45	1.06	0.04	0.86	0.91	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	19.5	46.0	0.0	59.1	19.1	3.6	88.6	73.4	35.9	100.2	72.5	1.9
Queue Delay	0.0	17.0	0.0	0.0	45.4	0.0	0.0	0.0	56.5	40.9	0.0	0.0
Total Delay	19.5	63.0	0.0	59.1	64.4	3.6	88.6	73.4	92.4	141.1	72.5	1.9
Queue Length 50th (ft)	6	~1607	0	186	998	11	78	26	62	103	20	0
Queue Length 95th (ft)	m6	m#1498	m0	m190	m1176	m11	132	58	156	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	107	2188	1112	270	2488	1245	182	244	337	181	244	289
Starvation Cap Reductn	0	37	0	0	420	0	0	0	0	0	0	0
Spillback Cap Reductn	0	413	0	0	0	0	0	0	147	89	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	1.31	0.04	0.76	1.10	0.08	0.37	0.10	1.08	0.97	0.07	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	2228	47	197	2183	95	65	23	197	85	17	46
Future Volume (veh/h)	45	2228	47	197	2183	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2321	49	205	2274	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	170	2329	1138	225	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.06	0.99	0.99	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2321	49	205	2274	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.3	0.0	0.0	5.7	20.1	0.1	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.3	0.0	0.0	5.7	20.1	0.1	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	2329	1138	225	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.28	1.00	0.04	0.91	0.94	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	188	2329	1138	375	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.2	0.0	0.0	17.9	0.4	0.2	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.0	4.9	0.0	1.2	1.1	0.0	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.6	0.0	4.7	0.8	0.0	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.2	4.9	0.0	19.1	1.4	0.3	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	A	A	B	A	A	E	E	F	E	E	E
Approach Vol, veh/h		2417			2578			297			155	
Approach Delay, s/veh		4.8			2.8			116.6			75.1	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	136.1		30.0	9.2	140.8		30.0				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24				
Max Q Clear Time (g_c+I1), s	7.7	2.0		17.3	3.3	22.1		25.2				
Green Ext Time (p_c), s	0.2	95.5		0.4	0.0	93.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		11.9	
HCM 6th LOS		B	

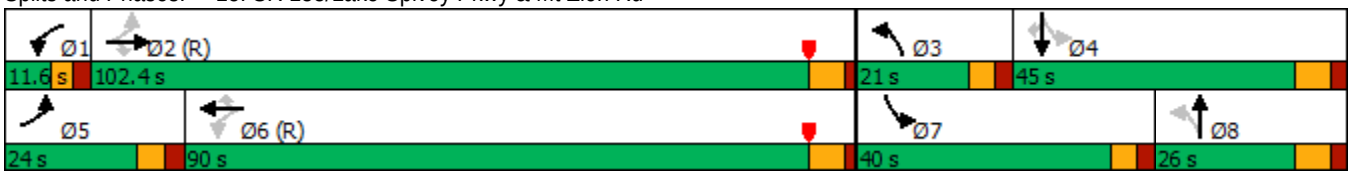
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	212	1814	168	47	1798	382	148	87	391	79	211
Future Volume (vph)	212	1814	168	47	1798	382	148	87	391	79	211
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	109.1	99.5	99.5	90.7	83.6	83.6	33.0	17.5	58.6	37.2	37.2
Actuated g/C Ratio	0.61	0.55	0.55	0.50	0.46	0.46	0.18	0.10	0.33	0.21	0.21
v/c Ratio	0.99	1.09	0.19	0.49	1.29	0.49	0.57	0.75	1.00	0.22	0.49
Control Delay	100.5	76.4	7.5	30.9	169.4	18.1	56.2	97.3	97.1	60.8	20.9
Queue Delay	0.0	3.8	0.0	0.0	0.1	0.0	0.0	0.1	33.2	0.0	0.0
Total Delay	100.5	80.2	7.5	30.9	169.5	18.1	56.2	97.4	130.3	60.8	20.9
LOS	F	F	A	C	F	B	E	F	F	E	C
Approach Delay		76.6			140.7			75.3		88.4	
Approach LOS		E			F			E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 104.5	Intersection LOS: F
Intersection Capacity Utilization 111.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





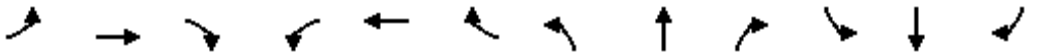
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	226	1930	179	50	1913	406	157	136	416	84	224
v/c Ratio	0.99	1.09	0.19	0.49	1.29	0.49	0.57	0.75	1.00	0.22	0.49
Control Delay	100.5	76.4	7.5	30.9	169.4	18.1	56.2	97.3	97.1	60.8	20.9
Queue Delay	0.0	3.8	0.0	0.0	0.1	0.0	0.0	0.1	33.2	0.0	0.0
Total Delay	100.5	80.2	7.5	30.9	169.5	18.1	56.2	97.4	130.3	60.8	20.9
Queue Length 50th (ft)	~245	~1384	24	23	~1504	111	136	147	431	83	57
Queue Length 95th (ft)	m#270	m#1436	m36	m29	#1632	m165	203	#239	#621	139	149
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	228	1767	934	102	1483	825	282	195	416	392	464
Starvation Cap Reductn	0	52	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	251	0	0	52	0	0	1	39	0	5
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.27	0.19	0.49	1.34	0.49	0.56	0.70	1.10	0.21	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1814	168	47	1798	382	148	87	40	391	79	211
Future Volume (veh/h)	212	1814	168	47	1798	382	148	87	40	391	79	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	1930	179	50	1913	406	157	93	43	416	84	224
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	215	1794	876	187	1560	762	283	107	50	393	363	308
Arrive On Green	0.20	1.00	1.00	0.06	0.96	0.96	0.08	0.09	0.09	0.19	0.19	0.19
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	1781	1870	1585
Grp Volume(v), veh/h	226	1930	179	50	1913	406	157	0	136	416	84	224
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	17.7	0.0	0.0	2.5	86.5	3.6	14.4	0.0	13.7	34.0	6.8	23.9
Cycle Q Clear(g_c), s	17.7	0.0	0.0	2.5	86.5	3.6	14.4	0.0	13.7	34.0	6.8	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	215	1794	876	187	1560	762	283	0	157	393	363	308
V/C Ratio(X)	1.05	1.08	0.20	0.27	1.23	0.53	0.55	0.00	0.87	1.06	0.23	0.73
Avail Cap(c_a), veh/h	215	1794	876	193	1560	762	283	0	186	393	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.20	0.34	0.34	0.34	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	0.0	0.0	21.4	3.5	1.9	67.7	0.0	81.0	60.0	61.2	68.0
Incr Delay (d2), s/veh	41.7	36.8	0.1	0.3	104.1	0.9	2.3	0.0	33.9	62.1	0.7	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	9.2	0.0	1.0	23.9	0.9	6.8	0.0	7.8	23.0	3.3	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.6	36.8	0.1	21.7	107.5	2.8	70.0	0.0	114.9	122.1	61.9	77.4
LnGrp LOS	F	F	A	C	F	A	E	A	F	F	E	E
Approach Vol, veh/h		2335			2369			293			724	
Approach Delay, s/veh		40.0			87.8			90.8			101.3	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	105.9	21.0	42.1	24.0	92.9	40.0	23.1
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.5	2.0	16.4	25.9	19.7	88.5	36.0	15.7
Green Ext Time (p_c), s	0.0	69.8	0.0	1.8	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	70.1
HCM 6th LOS	E

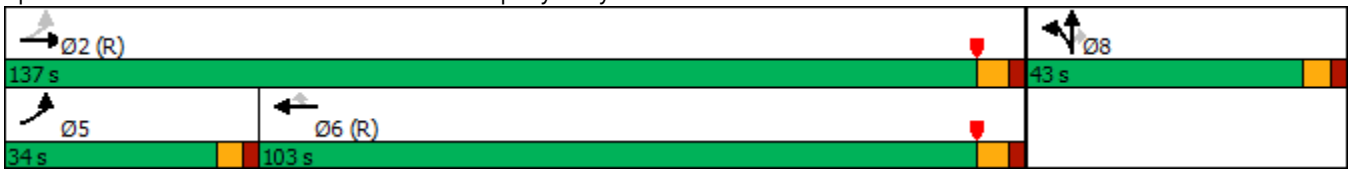
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	284	2202	1448	820	0	169
Future Volume (vph)	284	2202	1448	820	0	169
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	138.8	137.4	102.5	102.5	29.6	29.6
Actuated g/C Ratio	0.77	0.76	0.57	0.57	0.16	0.16
v/c Ratio	0.85	0.98	0.87	0.80	0.87	0.60
Control Delay	50.5	38.4	13.7	6.0	100.9	54.9
Queue Delay	0.0	41.2	41.5	3.2	2.9	0.0
Total Delay	50.5	79.6	55.2	9.3	103.8	55.0
LOS	D	E	E	A	F	D
Approach Delay		76.3	38.6		83.3	
Approach LOS		E	D		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 60.3	Intersection LOS: E
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy

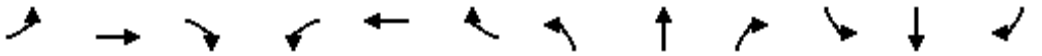




Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	309	2393	1574	891	253	184
v/c Ratio	0.85	0.98	0.87	0.80	0.87	0.60
Control Delay	50.5	38.4	13.7	6.0	100.9	54.9
Queue Delay	0.0	41.2	41.5	3.2	2.9	0.0
Total Delay	50.5	79.6	55.2	9.3	103.8	55.0
Queue Length 50th (ft)	254	1337	828	0	295	141
Queue Length 95th (ft)	m295	m1271	m425	m3	391	223
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	372	2438	1819	1119	362	369
Starvation Cap Reductn	0	446	156	142	0	0
Spillback Cap Reductn	0	288	371	0	45	4
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	1.20	1.09	0.91	0.80	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	2202	0	0	1448	820	233	0	169	0	0	0
Future Volume (veh/h)	284	2202	0	0	1448	820	233	0	169	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	309	2393	0	0	1574	0	253	0	184			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	383	2506	0	0	2180		277	0	246			
Arrive On Green	0.09	1.00	0.00	0.00	1.00	0.00	0.16	0.00	0.16			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	309	2393	0	0	1574	0	253	0	184			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	9.8	0.0	0.0	0.0	0.0	0.0	25.2	0.0	20.0			
Cycle Q Clear(g_c), s	9.8	0.0	0.0	0.0	0.0	0.0	25.2	0.0	20.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	383	2506	0	0	2180		277	0	246			
V/C Ratio(X)	0.81	0.96	0.00	0.00	0.72		0.91	0.00	0.75			
Avail Cap(c_a), veh/h	541	2506	0	0	2180		365	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.7	0.0	0.0	0.0	0.0	0.0	74.8	0.0	72.6			
Incr Delay (d2), s/veh	0.6	1.3	0.0	0.0	0.2	0.0	19.9	0.0	4.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.2	0.4	0.0	0.0	0.1	0.0	12.8	0.0	8.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.2	1.3	0.0	0.0	0.2	0.0	94.7	0.0	76.9			
LnGrp LOS	A	A	A	A	A		F	A	E			
Approach Vol, veh/h		2702			1574	A		437				
Approach Delay, s/veh		2.0			0.2			87.2				
Approach LOS		A			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		145.9			18.1	127.9		34.1				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			11.8	2.0		27.2				
Green Ext Time (p_c), s		109.3			0.8	46.6		0.8				

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

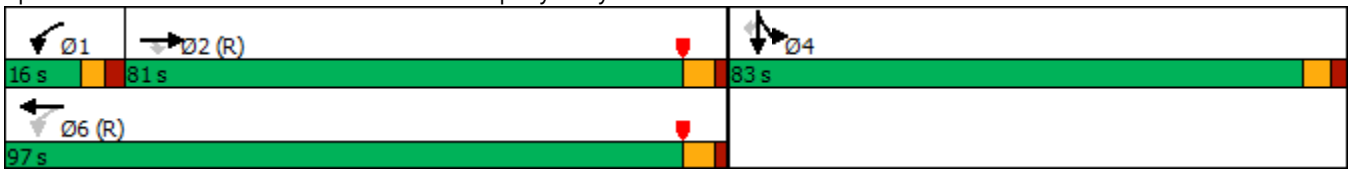
Notes

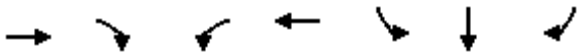
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1404	291	171	1597	1083	0	751
Future Volume (vph)	1404	291	171	1597	1083	0	751
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	91.2	90.7	76.8	76.8	76.8
Actuated g/C Ratio	0.42	0.42	0.51	0.50	0.43	0.43	0.43
v/c Ratio	1.13	0.37	1.28	1.06	0.80	0.80	1.13
Control Delay	104.7	5.1	191.4	64.5	55.2	55.2	119.2
Queue Delay	0.0	0.0	0.0	18.3	55.5	55.5	0.0
Total Delay	104.7	5.1	191.4	82.8	110.8	110.8	119.2
LOS	F	A	F	F	F	F	F
Approach Delay	87.6			93.3		114.2	
Approach LOS	F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 98.7	Intersection LOS: F
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





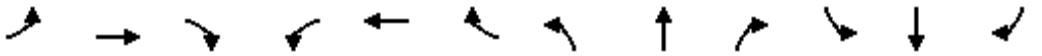
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1494	310	182	1699	576	576	799
v/c Ratio	1.13	0.37	1.28	1.06	0.80	0.80	1.13
Control Delay	104.7	5.1	191.4	64.5	55.2	55.2	119.2
Queue Delay	0.0	0.0	0.0	18.3	55.5	55.5	0.0
Total Delay	104.7	5.1	191.4	82.8	110.8	110.8	119.2
Queue Length 50th (ft)	~1064	44	~216	~1153	622	622	~1053
Queue Length 95th (ft)	#1208	m66	m#303	#1295	807	807	#1317
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	838	142	1609	717	717	706
Starvation Cap Reductn	0	0	0	127	0	0	0
Spillback Cap Reductn	0	0	0	0	379	379	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.37	1.28	1.15	1.70	1.70	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1404	291	171	1597	0	0	0	0	1083	0	751
Future Volume (veh/h)	0	1404	291	171	1597	0	0	0	0	1083	0	751
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1494	310	182	1699	0				1152	0	799
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1346	658	141	1635	0				1520	0	676
Arrive On Green	0.00	0.83	0.83	0.04	0.34	0.00				0.43	0.00	0.43
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1494	310	182	1699	0				1152	0	799
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	74.7	9.8	10.2	90.7	0.0				49.3	0.0	76.8
Cycle Q Clear(g_c), s	0.0	74.7	9.8	10.2	90.7	0.0				49.3	0.0	76.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1346	658	141	1635	0				1520	0	676
V/C Ratio(X)	0.00	1.11	0.47	1.29	1.04	0.00				0.76	0.00	1.18
Avail Cap(c_a), veh/h	0	1346	658	141	1635	0				1520	0	676
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.48	0.48	0.38	0.38	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.3	9.8	58.7	59.6	0.0				43.7	0.0	51.6
Incr Delay (d2), s/veh	0.0	55.2	1.2	149.9	25.4	0.0				2.3	0.0	96.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.0	2.7	12.5	43.7	0.0				21.5	0.0	47.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	70.5	11.0	208.6	85.0	0.0				46.0	0.0	147.9
LnGrp LOS	A	F	B	F	F	A				D	A	F
Approach Vol, veh/h		1804			1881						1951	
Approach Delay, s/veh		60.3			97.0						87.7	
Approach LOS		E			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	81.0		83.0		97.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	12.2	76.7		78.8		92.7
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		82.0
HCM 6th LOS		F

Notes

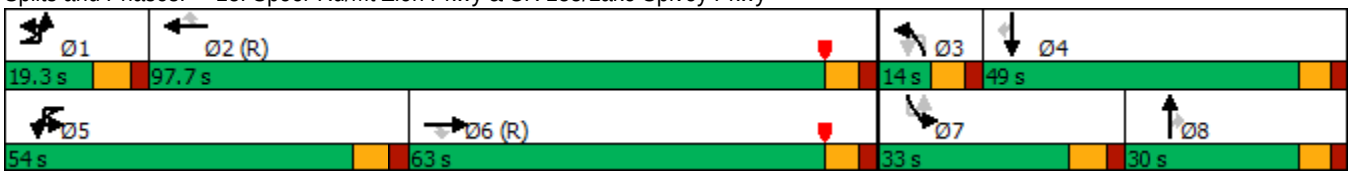
User approved volume balancing among the lanes for turning movement.

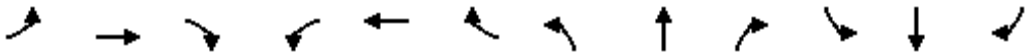
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	866	117	733	1075	288	73	172	293	402	356	161
Future Volume (vph)	141	866	117	733	1075	288	73	172	293	402	356	161
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	12.7	66.1	66.1	45.3	98.7	98.7	7.0	15.1	15.1	24.8	33.4	33.4
Actuated g/C Ratio	0.07	0.37	0.37	0.25	0.55	0.55	0.04	0.08	0.08	0.14	0.19	0.19
v/c Ratio	0.61	0.80	0.17	0.89	0.65	0.30	0.57	0.61	0.74	0.89	0.57	0.39
Control Delay	90.6	50.7	5.3	70.7	33.2	5.3	102.1	88.0	18.5	97.6	69.8	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.6	50.7	5.3	70.7	33.2	5.3	102.1	88.0	18.5	97.6	69.8	10.0
LOS	F	D	A	E	C	A	F	F	B	F	E	A
Approach Delay		51.0			42.5			52.1			71.5	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 51.3	Intersection LOS: D
Intersection Capacity Utilization 97.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy



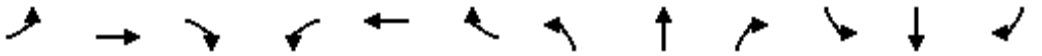


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	148	912	123	772	1132	303	77	181	308	423	375	169
v/c Ratio	0.61	0.80	0.17	0.89	0.65	0.30	0.57	0.61	0.74	0.89	0.57	0.39
Control Delay	90.6	50.7	5.3	70.7	33.2	5.3	102.1	88.0	18.5	97.6	69.8	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.6	50.7	5.3	70.7	33.2	5.3	102.1	88.0	18.5	97.6	69.8	10.0
Queue Length 50th (ft)	80	375	13	469	447	35	46	111	0	256	215	0
Queue Length 95th (ft)	122	#675	42	m423	m432	m25	79	152	104	#343	263	69
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	252	1143	707	910	1752	1005	135	460	473	488	833	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.80	0.17	0.85	0.65	0.30	0.57	0.39	0.65	0.87	0.45	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	866	117	733	1075	288	73	172	293	402	356	161
Future Volume (veh/h)	141	866	117	733	1075	288	73	172	293	402	356	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	912	123	772	1132	303	77	181	308	423	375	169
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	185	1083	543	810	1700	831	113	462	206	462	831	371
Arrive On Green	0.11	0.69	0.69	0.47	1.00	1.00	0.03	0.13	0.13	0.13	0.23	0.23
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	148	912	123	772	1132	303	77	181	308	423	375	169
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.5	38.6	5.2	38.6	0.0	0.0	4.0	8.4	23.4	21.7	16.3	16.5
Cycle Q Clear(g_c), s	7.5	38.6	5.2	38.6	0.0	0.0	4.0	8.4	23.4	21.7	16.3	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1083	543	810	1700	831	113	462	206	462	831	371
V/C Ratio(X)	0.80	0.84	0.23	0.95	0.67	0.36	0.68	0.39	1.49	0.92	0.45	0.46
Avail Cap(c_a), veh/h	227	1083	543	893	1700	831	136	462	206	491	837	373
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.5	24.7	19.4	46.8	0.0	0.0	86.1	71.8	78.3	77.0	59.1	59.1
Incr Delay (d2), s/veh	12.8	6.6	0.8	2.8	0.2	0.1	10.2	0.5	246.5	21.2	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	10.2	1.9	13.9	0.0	0.0	1.9	3.8	23.6	11.0	7.4	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	31.2	20.2	49.6	0.2	0.1	96.3	72.3	324.8	98.1	59.4	60.0
LnGrp LOS	F	C	C	D	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1183			2207			566			967	
Approach Delay, s/veh		37.7			17.5			213.0			76.5	
Approach LOS		D			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	101.4	12.8	48.7	49.7	68.8	31.5	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	9.5	2.0	6.0	18.5	40.6	40.6	23.7	25.4
Green Ext Time (p_c), s	0.1	31.8	0.0	2.9	1.6	9.1	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.4
HCM 6th LOS	E

Notes

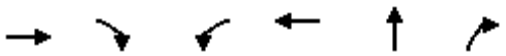
User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	847	54	374	883	0	217
Future Volume (vph)	847	54	374	883	0	217
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	44.0	44.0	25.0	69.0	21.0	21.0
Total Split (%)	48.9%	48.9%	27.8%	76.7%	23.3%	23.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	47.3	47.3	68.2	67.4	9.1	9.1
Actuated g/C Ratio	0.53	0.53	0.76	0.75	0.10	0.10
v/c Ratio	0.55	0.06	0.73	0.40	0.10	0.62
Control Delay	17.2	0.1	28.4	3.2	36.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.1	28.4	3.2	36.9	13.1
LOS	B	A	C	A	D	B
Approach Delay	16.1			10.7	15.0	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	892	57	394	929	19	228
v/c Ratio	0.55	0.06	0.73	0.40	0.10	0.62
Control Delay	17.2	0.1	28.4	3.2	36.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.1	28.4	3.2	36.9	13.1
Queue Length 50th (ft)	160	0	236	105	10	0
Queue Length 95th (ft)	284	1	340	159	30	63
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1634	887	615	2329	286	448
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.06	0.64	0.40	0.07	0.51

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	0	847	54	374	883	0	18	0	217	0	0
Future Volume (veh/h)	0	0	847	54	374	883	0	18	0	217	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		0	1663	1870	1870	1663	0	1900	1900	1900		
Adj Flow Rate, veh/h		0	892	57	394	929	0	19	0	228		
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %		0	16	2	2	16	0	0	0	0		
Cap, veh/h		0	1511	758	502	2184	0	288	0	256		
Arrive On Green		0.00	0.48	0.48	0.29	1.00	0.00	0.16	0.00	0.16		
Sat Flow, veh/h		0	3243	1585	1781	3243	0	1810	0	1610		
Grp Volume(v), veh/h		0	892	57	394	929	0	19	0	228		
Grp Sat Flow(s),veh/h/ln		0	1580	1585	1781	1580	0	1810	0	1610		
Q Serve(g_s), s		0.0	18.5	1.8	10.5	0.0	0.0	0.8	0.0	12.5		
Cycle Q Clear(g_c), s		0.0	18.5	1.8	10.5	0.0	0.0	0.8	0.0	12.5		
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00		
Lane Grp Cap(c), veh/h		0	1511	758	502	2184	0	288	0	256		
V/C Ratio(X)		0.00	0.59	0.08	0.79	0.43	0.00	0.07	0.00	0.89		
Avail Cap(c_a), veh/h		0	1511	758	618	2184	0	288	0	256		
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)		0.00	1.00	1.00	0.76	0.76	0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh		0.0	17.1	12.7	10.5	0.0	0.0	32.2	0.0	37.1		
Incr Delay (d2), s/veh		0.0	1.7	0.2	4.1	0.5	0.0	0.1	0.0	29.7		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		0.0	6.3	0.6	2.7	0.1	0.0	0.4	0.0	6.9		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	18.8	12.9	14.6	0.5	0.0	32.3	0.0	66.8		
LnGrp LOS		A	B	B	B	A	A	C	A	E		
Approach Vol, veh/h			949			1323			247			
Approach Delay, s/veh			18.4			4.7			64.2			
Approach LOS			B			A			E			

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	69.0			19.1	49.9		21.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	62.2			19.0	37.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			12.5	20.5		14.5					
Green Ext Time (p_c), s	21.9			0.7	10.7		0.0					

Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(I)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	28.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	115	450	322	117	122	190
Future Vol, veh/h	115	450	322	117	122	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	128	500	358	130	136	211

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	488	0	-	0	1179	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	756	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1086	-	-	-	211	631
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1086	-	-	-	177	631
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	464	-

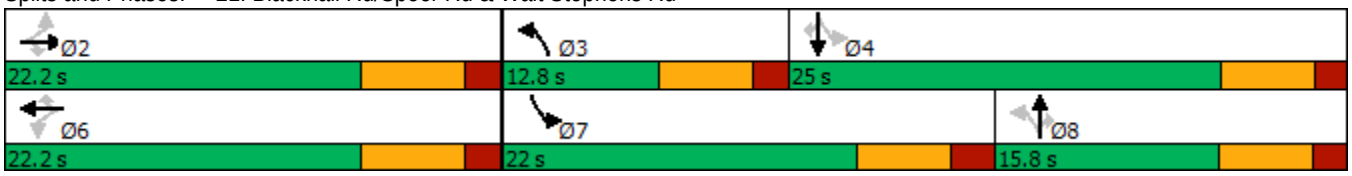
Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	117.6
HCM LOS			F

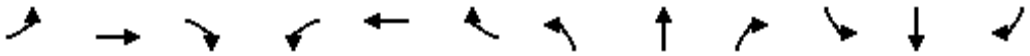
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1086	-	-	-	315
HCM Lane V/C Ratio	0.118	-	-	-	1.101
HCM Control Delay (s)	8.8	0	-	-	117.6
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	13.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	472	78	130	385	317	43	173	110	676	422	18
Future Volume (vph)	29	472	78	130	385	317	43	173	110	676	422	18
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	17.0	10.0	10.0	31.6	27.0	27.0
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.28	0.17	0.17	0.53	0.45	0.45
v/c Ratio	0.19	0.96	0.13	1.05	0.78	0.49	0.12	0.56	0.22	1.00	0.51	0.02
Control Delay	21.0	56.6	0.4	124.4	34.0	5.4	9.5	30.9	1.0	50.4	17.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	56.6	0.4	124.4	34.0	5.4	9.5	30.9	1.0	50.4	17.1	0.1
LOS	C	E	A	F	C	A	A	C	A	D	B	A
Approach Delay		47.3			37.2			18.0			37.0	
Approach LOS		D			D			B			D	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 60		
Natural Cycle: 80		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.05		
Intersection Signal Delay: 37.0	Intersection LOS: D	
Intersection Capacity Utilization 104.0%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd



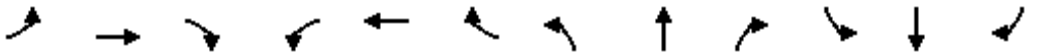


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	29	477	79	131	389	320	43	175	111	683	426	18
v/c Ratio	0.19	0.96	0.13	1.05	0.78	0.49	0.12	0.56	0.22	1.00	0.51	0.02
Control Delay	21.0	56.6	0.4	124.4	34.0	5.4	9.5	30.9	1.0	50.4	17.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	56.6	0.4	124.4	34.0	5.4	9.5	30.9	1.0	50.4	17.1	0.1
Queue Length 50th (ft)	8	169	0	~53	130	0	7	59	0	173	84	0
Queue Length 95th (ft)	28	#335	0	#145	#254	51	19	114	0	#361	#236	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	151	498	621	125	498	658	366	310	495	683	837	802
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.96	0.13	1.05	0.78	0.49	0.12	0.56	0.22	1.00	0.51	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	472	78	130	385	317	43	173	110	676	422	18
Future Volume (veh/h)	29	472	78	130	385	317	43	173	110	676	422	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	477	79	131	389	320	43	175	111	683	426	18
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	175	500	423	134	500	423	384	312	264	677	705	598
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.38	0.38
Sat Flow, veh/h	746	1885	1598	860	1885	1598	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	29	477	79	131	389	320	43	175	111	683	426	18
Grp Sat Flow(s),veh/h/ln	746	1885	1598	860	1885	1598	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.2	14.9	2.3	1.0	11.5	11.0	1.1	5.2	3.8	15.8	11.0	0.4
Cycle Q Clear(g_c), s	13.7	14.9	2.3	15.9	11.5	11.0	1.1	5.2	3.8	15.8	11.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	500	423	134	500	423	384	312	264	677	705	598
V/C Ratio(X)	0.17	0.95	0.19	0.98	0.78	0.76	0.11	0.56	0.42	1.01	0.60	0.03
Avail Cap(c_a), veh/h	175	500	423	134	500	423	485	312	264	677	705	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	21.7	17.0	29.9	20.4	20.3	18.4	23.0	22.4	15.9	15.1	11.8
Incr Delay (d2), s/veh	0.9	29.5	0.5	71.6	8.9	9.0	0.1	2.3	1.1	36.7	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	9.6	0.8	4.4	5.5	4.5	0.4	2.2	1.3	12.8	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	51.2	17.5	101.6	29.3	29.2	18.5	25.3	23.5	52.6	16.5	11.8
LnGrp LOS	C	D	B	F	C	C	B	C	C	F	B	B
Approach Vol, veh/h		585			840			329			1127	
Approach Delay, s/veh		45.5			40.5			23.8			38.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.4	28.4		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		16.9	3.1	13.0		17.9	17.8	7.2				
Green Ext Time (p_c), s		0.0	0.0	1.3		0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D

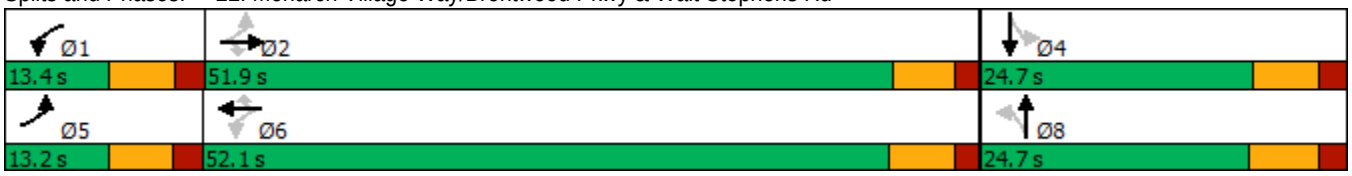
Notes

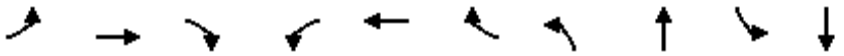
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	83	1009	102	41	662	110	82	15	84	15
Future Volume (vph)	83	1009	102	41	662	110	82	15	84	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	51.9	51.9	13.4	52.1	52.1	24.7	24.7	24.7	24.7
Total Split (%)	14.7%	57.7%	57.7%	14.9%	57.9%	57.9%	27.4%	27.4%	27.4%	27.4%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	53.6	51.4	51.4	52.1	48.4	48.4	11.7	11.7	11.9	11.9
Actuated g/C Ratio	0.69	0.66	0.66	0.67	0.62	0.62	0.15	0.15	0.15	0.15
v/c Ratio	0.17	0.82	0.09	0.16	0.57	0.11	0.42	0.22	0.42	0.26
Control Delay	5.4	23.7	1.9	6.1	15.2	2.2	39.2	15.3	38.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	23.7	1.9	6.1	15.2	2.2	39.2	15.3	38.7	14.1
LOS	A	C	A	A	B	A	D	B	D	B
Approach Delay		20.6			13.0			28.8		26.8
Approach LOS		C			B			C		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd

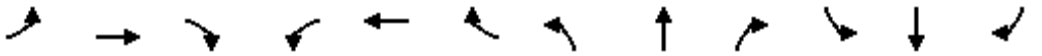




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	1019	103	41	669	111	83	64	85	79
v/c Ratio	0.17	0.82	0.09	0.16	0.57	0.11	0.42	0.22	0.42	0.26
Control Delay	5.4	23.7	1.9	6.1	15.2	2.2	39.2	15.3	38.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	23.7	1.9	6.1	15.2	2.2	39.2	15.3	38.7	14.1
Queue Length 50th (ft)	11	472	0	5	220	0	41	7	41	7
Queue Length 95th (ft)	28	#844	18	16	382	21	84	41	85	45
Internal Link Dist (ft)		2243			4129			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	482	1240	1095	253	1240	1095	307	422	316	437
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.82	0.09	0.16	0.54	0.10	0.27	0.15	0.27	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1009	102	41	662	110	82	15	49	84	15	63
Future Volume (veh/h)	83	1009	102	41	662	110	82	15	49	84	15	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1019	103	41	669	111	83	15	49	85	15	64
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	438	1077	913	219	1041	882	210	52	169	223	42	177
Arrive On Green	0.07	0.57	0.57	0.05	0.55	0.55	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1795	1885	1598	1795	1885	1598	1320	385	1259	1338	310	1322
Grp Volume(v), veh/h	84	1019	103	41	669	111	83	0	64	85	0	79
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	1885	1598	1320	0	1644	1338	0	1632
Q Serve(g_s), s	1.5	40.0	2.3	0.7	19.5	2.7	4.8	0.0	2.8	4.8	0.0	3.5
Cycle Q Clear(g_c), s	1.5	40.0	2.3	0.7	19.5	2.7	8.3	0.0	2.8	7.6	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.81
Lane Grp Cap(c), veh/h	438	1077	913	219	1041	882	210	0	220	223	0	219
V/C Ratio(X)	0.19	0.95	0.11	0.19	0.64	0.13	0.40	0.00	0.29	0.38	0.00	0.36
Avail Cap(c_a), veh/h	462	1093	927	283	1093	927	332	0	373	353	0	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.5	15.9	7.8	16.5	12.3	8.6	35.0	0.0	30.9	34.4	0.0	31.2
Incr Delay (d2), s/veh	0.1	16.3	0.1	0.2	1.8	0.1	1.2	0.0	0.7	1.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	17.9	0.7	0.3	7.1	0.8	1.6	0.0	1.1	1.6	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	32.1	7.9	16.6	14.1	8.7	36.2	0.0	31.7	35.4	0.0	32.2
LnGrp LOS	A	C	A	B	B	A	D	A	C	D	A	C
Approach Vol, veh/h		1206			821			147			164	
Approach Delay, s/veh		28.4			13.5			34.3			33.9	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	51.4		17.3	12.1	49.9		17.3				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 46		* 18	7.0	* 46		18.0				
Max Q Clear Time (g_c+I1), s	2.7	42.0		9.6	3.5	21.5		10.3				
Green Ext Time (p_c), s	0.0	3.3		0.4	0.0	9.3		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		23.9	
HCM 6th LOS		C	

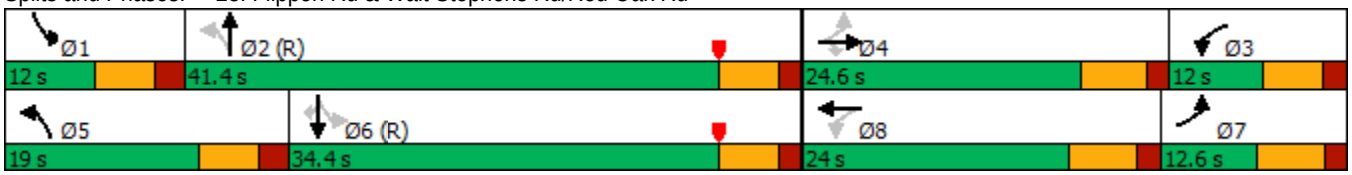
Notes

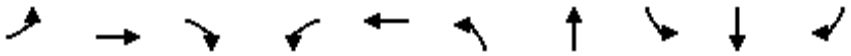
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	352	342	626	43	188	442	404	54	572	326
Future Volume (vph)	352	342	626	43	188	442	404	54	572	326
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	27.5	23.4	23.4	21.7	15.3	47.4	38.2	34.4	28.8	28.8
Actuated g/C Ratio	0.31	0.26	0.26	0.24	0.17	0.53	0.42	0.38	0.32	0.32
v/c Ratio	1.06	0.75	1.01	0.22	0.74	1.38	0.60	0.17	1.02	0.47
Control Delay	97.6	44.7	57.8	25.8	48.3	214.9	10.9	12.7	74.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.6	44.7	57.8	25.8	48.3	214.9	10.9	12.7	74.9	4.9
LOS	F	D	E	C	D	F	B	B	E	A
Approach Delay		65.0			44.6		113.2		47.4	
Approach LOS		E			D		F		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 70.9	Intersection LOS: E
Intersection Capacity Utilization 105.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





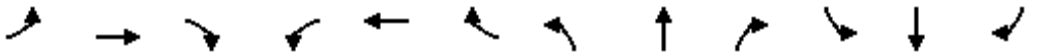
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	378	368	673	46	237	475	472	58	615	351
v/c Ratio	1.06	0.75	1.01	0.22	0.74	1.38	0.60	0.17	1.02	0.47
Control Delay	97.6	44.7	57.8	25.8	48.3	214.9	10.9	12.7	74.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.6	44.7	57.8	25.8	48.3	214.9	10.9	12.7	74.9	4.9
Queue Length 50th (ft)	~206	208	~281	17	123	~296	110	15	~362	0
Queue Length 95th (ft)	#360	#378	#496	41	198	m#397	m147	34	#580	59
Internal Link Dist (ft)		2158			3175		1869		1419	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	358	488	665	208	373	343	784	346	601	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.75	1.01	0.22	0.64	1.38	0.60	0.17	1.02	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	342	626	43	188	33	442	404	35	54	572	326
Future Volume (veh/h)	352	342	626	43	188	33	442	404	35	54	572	326
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	378	368	673	46	202	35	475	434	38	58	615	351
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	279	390	330	162	240	42	349	735	64	393	641	543
Arrive On Green	0.10	0.21	0.21	0.05	0.15	0.15	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	1795	1885	1598	1795	1565	271	1781	1695	148	1795	1885	1598
Grp Volume(v), veh/h	378	368	673	46	0	237	475	0	472	58	615	351
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1836	1781	0	1844	1795	1885	1598
Q Serve(g_s), s	8.8	17.3	12.1	0.0	0.0	11.3	13.0	0.0	17.5	1.8	28.8	10.9
Cycle Q Clear(g_c), s	8.8	17.3	12.1	0.0	0.0	11.3	13.0	0.0	17.5	1.8	28.8	10.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	279	390	330	162	0	281	349	0	799	393	641	543
V/C Ratio(X)	1.36	0.94	2.04	0.28	0.00	0.84	1.36	0.00	0.59	0.15	0.96	0.65
Avail Cap(c_a), veh/h	279	390	330	204	0	365	349	0	799	421	641	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.28	0.28	0.28	1.00	0.00	1.00	0.30	0.00	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	35.2	15.1	41.0	0.0	37.1	25.1	0.0	19.4	17.7	29.1	10.8
Incr Delay (d2), s/veh	167.2	13.2	470.2	1.0	0.0	13.0	167.8	0.0	1.0	0.2	26.9	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.7	8.9	47.2	1.0	0.0	5.9	21.2	0.0	6.9	0.7	16.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	206.1	48.4	485.3	41.9	0.0	50.1	192.9	0.0	20.4	17.9	56.0	16.6
LnGrp LOS	F	D	F	D	A	D	F	A	C	B	E	B
Approach Vol, veh/h		1419			283			947			1024	
Approach Delay, s/veh		297.6			48.8			106.9			40.3	
Approach LOS		F			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	44.6	10.2	24.6	19.0	36.2	14.9	19.9
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	3.8	19.5	2.0	19.3	15.0	30.8	10.8	13.3
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	157.5
HCM 6th LOS	F

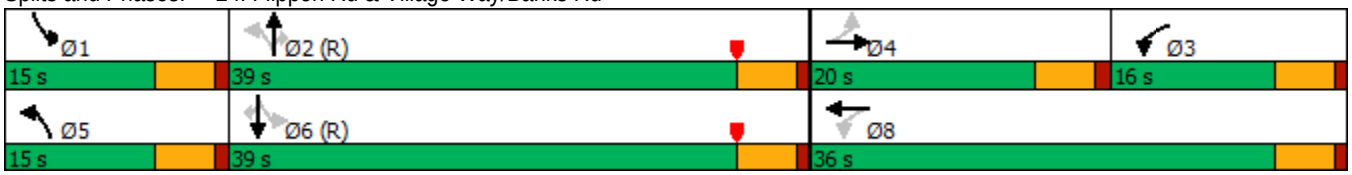
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	2	152	3	7	623	157	343	859	9
Future Volume (vph)	5	2	152	3	7	623	157	343	859	9
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	10.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	16.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	20.0	20.0	16.0	36.0	15.0	39.0	39.0	15.0	39.0	39.0
Total Split (%)	22.2%	22.2%	17.8%	40.0%	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	18.2	18.2	44.3	34.3	34.3	61.0	58.8	58.8
Actuated g/C Ratio		0.17	0.20	0.20	0.49	0.38	0.38	0.68	0.65	0.65
v/c Ratio		0.03	0.46	0.48	0.02	0.91	0.23	0.66	0.74	0.01
Control Delay		28.7	35.0	6.9	7.9	45.1	5.4	24.5	10.4	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	35.0	6.9	7.9	45.1	5.4	24.5	10.4	0.0
LOS		C	D	A	A	D	A	C	B	A
Approach Delay		28.7		17.7		36.8			14.3	
Approach LOS		C		B		D			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 81.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd



24: Flippen Rd & Village Way/Banks Rd

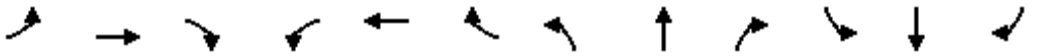


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	158	254	7	649	164	357	895	9
v/c Ratio	0.03	0.46	0.48	0.02	0.91	0.23	0.66	0.74	0.01
Control Delay	28.7	35.0	6.9	7.9	45.1	5.4	24.5	10.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	35.0	6.9	7.9	45.1	5.4	24.5	10.4	0.0
Queue Length 50th (ft)	3	83	1	1	337	7	99	43	0
Queue Length 95th (ft)	17	114	52	8	#559	46	m#186	m#626	m0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	308	351	722	336	716	704	545	1217	1105
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.45	0.35	0.02	0.91	0.23	0.66	0.74	0.01

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	2	152	3	241	7	623	157	343	859	9
Future Volume (veh/h)	5	2	2	152	3	241	7	623	157	343	859	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1870	1900
Adj Flow Rate, veh/h	5	2	2	158	3	251	7	649	164	357	895	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	0	2	0
Cap, veh/h	62	6	2	298	4	316	352	988	844	468	1155	994
Arrive On Green	0.03	0.03	0.03	0.11	0.20	0.20	0.02	0.52	0.52	0.15	0.82	0.82
Sat Flow, veh/h	0	186	53	1810	19	1594	1810	1885	1610	1810	1870	1610
Grp Volume(v), veh/h	9	0	0	158	0	254	7	649	164	357	895	9
Grp Sat Flow(s),veh/h/ln	239	0	0	1810	0	1613	1810	1885	1610	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	2.2	0.0	13.5	0.2	22.5	2.6	7.9	21.2	0.1
Cycle Q Clear(g_c), s	3.0	0.0	0.0	2.2	0.0	13.5	0.2	22.5	2.6	7.9	21.2	0.1
Prop In Lane	0.56		0.22	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	0	0	298	0	320	352	988	844	468	1155	994
V/C Ratio(X)	0.13	0.00	0.00	0.53	0.00	0.79	0.02	0.66	0.19	0.76	0.78	0.01
Avail Cap(c_a), veh/h	250	0	0	322	0	556	520	988	844	468	1155	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.11	0.11	0.11
Uniform Delay (d), s/veh	42.5	0.0	0.0	35.9	0.0	34.3	10.4	15.5	3.3	12.8	5.0	3.1
Incr Delay (d2), s/veh	1.7	0.0	0.0	2.1	0.0	9.2	0.0	3.4	0.5	0.9	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.2	0.0	5.9	0.1	9.2	1.6	2.3	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	0.0	38.0	0.0	43.5	10.4	19.0	3.8	13.7	5.6	3.1
LnGrp LOS	D	A	A	D	A	D	B	B	A	B	A	A
Approach Vol, veh/h		9			412			820			1261	
Approach Delay, s/veh		44.2			41.4			15.8			7.8	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	52.2	14.8	8.0	6.6	60.6		22.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	10.0	34.0	11.0	15.0	10.0	34.0		31.0
Max Q Clear Time (g_c+I1), s	9.9	24.5	4.2	5.0	2.2	23.2		15.5
Green Ext Time (p_c), s	0.0	5.2	0.3	0.0	0.0	7.0		2.3

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	432	328	48	54	48
Future Vol, veh/h	43	432	328	48	54	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	465	353	52	58	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	405	0	-	0	936	379
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	557	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1154	-	-	-	294	668
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1154	-	-	-	278	668
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	655	-
Stage 2	-	-	-	-	574	-

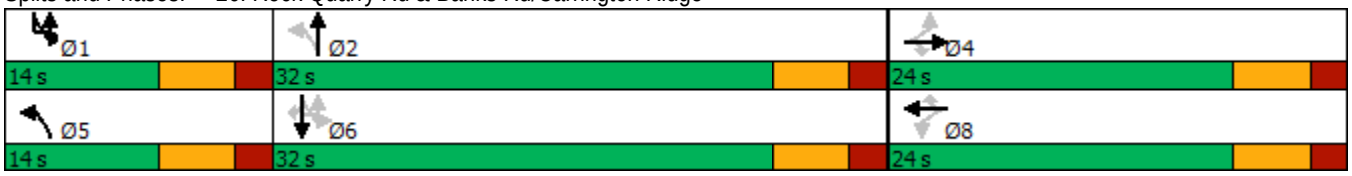
Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1154	-	-	-	383
HCM Lane V/C Ratio	0.04	-	-	-	0.286
HCM Control Delay (s)	8.2	0	-	-	18.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	79	25	339	24	15	8	270	646	14	700	91
Future Volume (vph)	79	25	339	24	15	8	270	646	14	700	91
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	32.0	14.0	32.0	32.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	20.0%	45.7%	20.0%	45.7%	45.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)		11.1	11.1		11.1	11.1	34.9	33.5	27.4	21.3	21.3
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.59	0.57	0.47	0.36	0.36
v/c Ratio		0.41	0.63		0.15	0.02	0.60	0.35	0.03	0.56	0.14
Control Delay		26.9	9.9		22.1	0.1	13.5	8.9	6.3	17.2	1.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		26.9	9.9		22.1	0.1	13.5	8.9	6.3	17.2	1.8
LOS		C	A		C	A	B	A	A	B	A
Approach Delay		13.9			18.5			10.2		15.2	
Approach LOS		B			B			B		B	

Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 58.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge

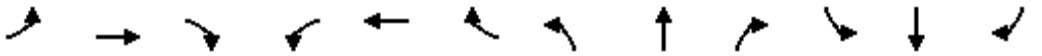




Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	353	41	8	281	706	15	729	95
v/c Ratio	0.41	0.63	0.15	0.02	0.60	0.35	0.03	0.56	0.14
Control Delay	26.9	9.9	22.1	0.1	13.5	8.9	6.3	17.2	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	9.9	22.1	0.1	13.5	8.9	6.3	17.2	1.8
Queue Length 50th (ft)	34	11	12	0	37	50	2	100	0
Queue Length 95th (ft)	78	75	36	0	#117	161	9	177	13
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	437	721	453	599	467	2006	513	1607	803
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.49	0.09	0.01	0.60	0.35	0.03	0.45	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	25	339	24	15	8	270	646	32	14	700	91
Future Volume (veh/h)	79	25	339	24	15	8	270	646	32	14	700	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	82	26	353	25	16	8	281	673	33	15	729	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	1	2	2	0	1	0
Cap, veh/h	99	19	455	91	38	455	428	1424	70	357	1109	498
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.13	0.41	0.41	0.02	0.31	0.31
Sat Flow, veh/h	0	67	1610	0	135	1610	1795	3448	169	1810	3582	1610
Grp Volume(v), veh/h	108	0	353	41	0	8	281	347	359	15	729	95
Grp Sat Flow(s),veh/h/ln	67	0	1610	135	0	1610	1795	1777	1840	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	12.8	0.0	0.0	0.2	6.3	9.1	9.1	0.4	11.2	2.8
Cycle Q Clear(g_c), s	18.0	0.0	12.8	18.0	0.0	0.2	6.3	9.1	9.1	0.4	11.2	2.8
Prop In Lane	0.76		1.00	0.61		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	118	0	455	129	0	455	428	734	760	357	1109	498
V/C Ratio(X)	0.91	0.00	0.78	0.32	0.00	0.02	0.66	0.47	0.47	0.04	0.66	0.19
Avail Cap(c_a), veh/h	118	0	455	129	0	455	428	734	760	544	1461	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	21.0	19.0	0.0	16.5	13.1	13.6	13.6	14.4	19.1	16.1
Incr Delay (d2), s/veh	56.4	0.0	8.2	1.4	0.0	0.0	3.4	1.0	1.0	0.0	1.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	5.6	0.5	0.0	0.1	2.3	3.1	3.2	0.1	4.2	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.2	0.0	29.2	20.4	0.0	16.5	16.5	14.6	14.6	14.4	20.5	16.5
LnGrp LOS	F	A	C	C	A	B	B	B	B	B	C	B
Approach Vol, veh/h		461			49			987			839	
Approach Delay, s/veh		42.4			19.7			15.2			19.9	
Approach LOS		D			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	32.3		24.0	14.0	25.7		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	26.0		18.0	8.0	26.0		18.0				
Max Q Clear Time (g_c+I1), s	2.4	11.1		20.0	8.3	13.2		20.0				
Green Ext Time (p_c), s	0.0	6.1		0.0	0.0	6.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		22.3	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	194	1	99	5	0	2	62	673	4	2	696	131
Future Vol, veh/h	194	1	99	5	0	2	62	673	4	2	696	131
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	0	0	0	2	2	0	0	2	2
Mvmt Flow	204	1	104	5	0	2	65	708	4	2	733	138

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1221	1579	367	1209	-	354	871	0	0	712	0	0
Stage 1	737	737	-	838	-	-	-	-	-	-	-	-
Stage 2	484	842	-	371	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.5	6.94	7.5	-	6.9	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	6.54	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4	3.32	3.5	-	3.3	2.22	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 136	110	630	141	0	648	770	-	-	897	-	-
Stage 1	376	428	-	331	0	-	-	-	-	-	-	-
Stage 2	533	383	-	627	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 127	101	630	109	-	648	770	-	-	897	-	-
Mov Cap-2 Maneuver	~ 127	101	-	109	-	-	-	-	-	-	-	-
Stage 1	344	427	-	303	-	-	-	-	-	-	-	-
Stage 2	486	351	-	521	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	10.6	0.8	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	770	-	-	630	648	897	-	-
HCM Lane V/C Ratio	0.085	-	-	0.165	0.003	0.002	-	-
HCM Control Delay (s)	10.1	-	-	11.8	10.6	9	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.6	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	135	266	20	6	167	23	10	59	11	12	78	82
Future Vol, veh/h	135	266	20	6	167	23	10	59	11	12	78	82
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	5	0	0	1	5	0	0	0	0	0	0
Mvmt Flow	150	296	22	7	186	26	11	66	12	13	87	91
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.6	10.9	10.1	11
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	32%	3%	7%
Vol Thru, %	74%	63%	85%	45%
Vol Right, %	14%	5%	12%	48%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	421	196	172
LT Vol	10	135	6	12
Through Vol	59	266	167	78
RT Vol	11	20	23	82
Lane Flow Rate	89	468	218	191
Geometry Grp	1	1	1	1
Degree of Util (X)	0.148	0.663	0.323	0.296
Departure Headway (Hd)	6.001	5.104	5.339	5.575
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	596	706	673	642
Service Time	4.061	3.138	3.383	3.625
HCM Lane V/C Ratio	0.149	0.663	0.324	0.298
HCM Control Delay	10.1	17.6	10.9	11
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.5	5	1.4	1.2

Intersection	
Intersection Delay, s/veh	33.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	101	452	53	12	333	82	41	5	20	82	10	75
Future Vol, veh/h	101	452	53	12	333	82	41	5	20	82	10	75
Peak Hour Factor	0.90	0.90	0.90	0.94	0.90	0.94	0.90	0.94	0.94	0.94	0.94	0.90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	112	502	59	13	370	87	46	5	21	87	11	83
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	44.2	29.6	11.9	13.8
HCM LOS	E	D	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	62%	100%	0%	100%	0%	49%
Vol Thru, %	8%	0%	90%	0%	80%	6%
Vol Right, %	30%	0%	10%	0%	20%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	101	505	12	415	167
LT Vol	41	101	0	12	0	82
Through Vol	5	0	452	0	333	10
RT Vol	20	0	53	0	82	75
Lane Flow Rate	72	112	561	13	457	181
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.151	0.209	0.954	0.025	0.804	0.351
Departure Headway (Hd)	7.522	6.706	6.122	7.014	6.328	6.978
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	538	595	512	576	515
Service Time	5.59	4.421	3.837	4.731	4.045	5.031
HCM Lane V/C Ratio	0.152	0.208	0.943	0.025	0.793	0.351
HCM Control Delay	11.9	11.2	50.8	9.9	30.1	13.8
HCM Lane LOS	B	B	F	A	D	B
HCM 95th-tile Q	0.5	0.8	12.9	0.1	7.9	1.6

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	12	14	0	40	16	704	17	44	938	28
Future Vol, veh/h	20	0	12	14	0	40	16	704	17	44	938	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	1	1	0
Mvmt Flow	22	0	13	16	0	44	18	782	19	49	1042	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1990	1977	1042	1980	1989	782	1073	0	0	801	0	0
Stage 1	1140	1140	-	818	818	-	-	-	-	-	-	-
Stage 2	850	837	-	1162	1171	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	46	63	281	46	62	394	657	-	-	827	-	-
Stage 1	247	278	-	370	393	-	-	-	-	-	-	-
Stage 2	358	385	-	237	269	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	58	281	41	57	394	657	-	-	827	-	-
Mov Cap-2 Maneuver	38	58	-	41	57	-	-	-	-	-	-	-
Stage 1	240	262	-	360	382	-	-	-	-	-	-	-
Stage 2	309	375	-	212	253	-	-	-	-	-	-	-

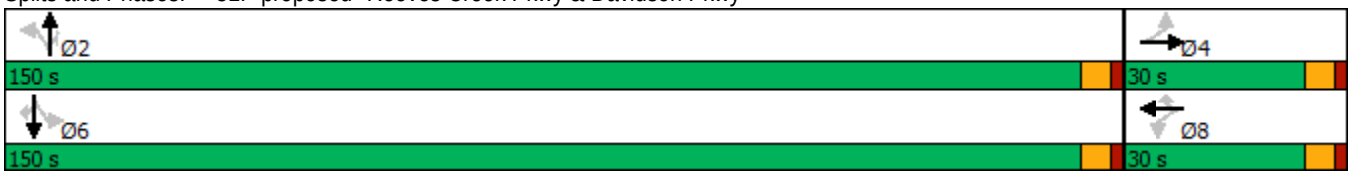
Approach	EB	WB	NB	SB
HCM Control Delay, s	145.6	60.2	0.2	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	657	-	-	56	122	827	-	-
HCM Lane V/C Ratio	0.027	-	-	0.635	0.492	0.059	-	-
HCM Control Delay (s)	10.6	-	-	145.6	60.2	9.6	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	2.2	0.2	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	43	17	166	23	260	8	823	212	377	527	56
Future Volume (vph)	43	17	166	23	260	8	823	212	377	527	56
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8			2			6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	4	4	8	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	150.0	150.0	150.0	150.0	150.0	150.0
Total Split (%)	16.7%	16.7%	16.7%	16.7%	16.7%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	24.0	24.0		24.0	24.0	144.0	144.0	144.0	144.0	144.0	144.0
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.80	0.80	0.80	0.80	0.80	0.80
v/c Ratio	0.77	0.10		1.13	0.68	0.01	0.60	0.18	1.08	0.39	0.05
Control Delay	136.2	55.3		170.7	21.9	3.8	8.9	0.7	88.5	6.0	0.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.2	55.3		170.7	21.9	3.8	8.9	0.7	88.5	6.0	0.8
LOS	F	E		F	C	A	A	A	F	A	A
Approach Delay		107.8		84.5			7.2			38.1	
Approach LOS		F		F			A			D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Natural Cycle: 170	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & Davidson Pkwy



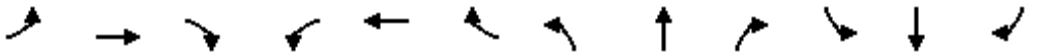


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	48	26	210	289	9	914	236	419	586	62
v/c Ratio	0.77	0.10	1.13	0.68	0.01	0.60	0.18	1.08	0.39	0.05
Control Delay	136.2	55.3	170.7	21.9	3.8	8.9	0.7	88.5	6.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.2	55.3	170.7	21.9	3.8	8.9	0.7	88.5	6.0	0.8
Queue Length 50th (ft)	56	20	~286	46	2	367	0	~549	176	0
Queue Length 95th (ft)	#142	55	#470	159	6	462	17	#310	225	10
Internal Link Dist (ft)		316	796			651			1270	
Turn Bay Length (ft)										
Base Capacity (vph)	62	249	186	428	620	1520	1339	388	1520	1304
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.10	1.13	0.68	0.01	0.60	0.18	1.08	0.39	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	17	6	166	23	260	8	823	212	377	527	56
Future Volume (veh/h)	43	17	6	166	23	260	8	823	212	377	527	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	19	7	184	26	289	9	914	236	419	586	62
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	40	177	65	191	22	215	605	1520	1288	345	1520	1288
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	1081	1324	488	1153	163	1610	796	1900	1610	497	1900	1610
Grp Volume(v), veh/h	48	0	26	210	0	289	9	914	236	419	586	62
Grp Sat Flow(s),veh/h/ln	1081	0	1812	1316	0	1610	796	1900	1610	497	1900	1610
Q Serve(g_s), s	0.0	0.0	2.3	21.7	0.0	24.0	0.6	33.4	6.2	110.6	16.1	1.4
Cycle Q Clear(g_c), s	24.0	0.0	2.3	24.0	0.0	24.0	16.7	33.4	6.2	144.0	16.1	1.4
Prop In Lane	1.00		0.27	0.88		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	0	242	213	0	215	605	1520	1288	345	1520	1288
V/C Ratio(X)	1.20	0.00	0.11	0.99	0.00	1.35	0.01	0.60	0.18	1.21	0.39	0.05
Avail Cap(c_a), veh/h	40	0	242	213	0	215	605	1520	1288	345	1520	1288
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	90.0	0.0	68.6	80.9	0.0	78.0	7.6	6.9	4.2	41.1	5.2	3.7
Incr Delay (d2), s/veh	207.2	0.0	0.2	57.5	0.0	183.4	0.0	1.8	0.3	119.9	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	1.1	13.2	0.0	20.9	0.1	12.1	1.9	27.5	5.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	297.2	0.0	68.8	138.4	0.0	261.4	7.7	8.7	4.5	161.0	5.9	3.8
LnGrp LOS	F	A	E	F	A	F	A	A	A	F	A	A
Approach Vol, veh/h		74			499			1159			1067	
Approach Delay, s/veh		217.0			209.7			7.8			66.7	
Approach LOS		F			F			A			E	

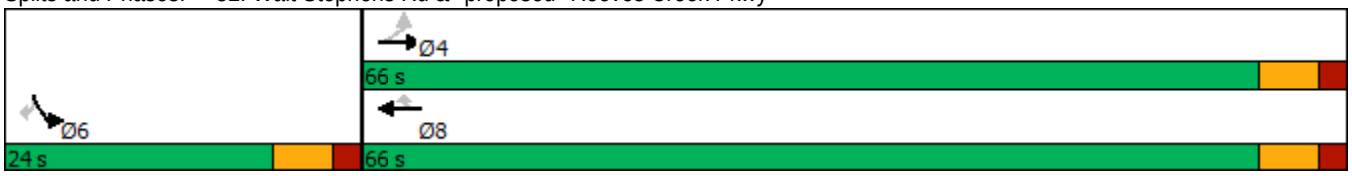
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		150.0		30.0		150.0		30.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		144.0		24.0		144.0		24.0				
Max Q Clear Time (g_c+I1), s		35.4		26.0		146.0		26.0				
Green Ext Time (p_c), s		9.4		0.0		0.0		0.0				

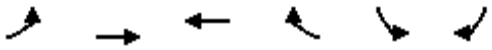
Intersection Summary												
HCM 6th Ctrl Delay			71.8									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	105	1062	815	140	260	167
Future Volume (vph)	105	1062	815	140	260	167
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	66.0	66.0	66.0	66.0	24.0	24.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	56.5	56.5	56.5	56.5	18.1	18.1
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.21	0.21
v/c Ratio	0.51	0.95	0.73	0.14	0.77	0.39
Control Delay	17.1	31.7	14.2	1.2	48.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	31.7	14.2	1.2	48.7	7.9
LOS	B	C	B	A	D	A
Approach Delay		30.4	12.3		32.7	
Approach LOS		C	B		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 32: Walt Stephens Rd & *proposed* Reeves Creek Pkwy

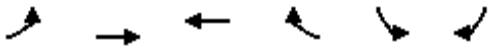




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	117	1180	906	156	289	186
v/c Ratio	0.51	0.95	0.73	0.14	0.77	0.39
Control Delay	17.1	31.7	14.2	1.2	48.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	31.7	14.2	1.2	48.7	7.9
Queue Length 50th (ft)	29	520	289	0	158	1
Queue Length 95th (ft)	84	#896	433	18	#285	55
Internal Link Dist (ft)		4129	2158		943	
Turn Bay Length (ft)						
Base Capacity (vph)	245	1322	1322	1171	377	482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.89	0.69	0.13	0.77	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	105	1062	815	140	260	167
Future Volume (veh/h)	105	1062	815	140	260	167
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	1180	906	156	289	186
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	268	1247	1247	1057	373	332
Arrive On Green	0.66	0.66	0.66	0.66	0.21	0.21
Sat Flow, veh/h	540	1900	1900	1610	1810	1610
Grp Volume(v), veh/h	117	1180	906	156	289	186
Grp Sat Flow(s),veh/h/ln	540	1900	1900	1610	1810	1610
Q Serve(g_s), s	15.9	49.2	27.3	3.2	13.2	9.0
Cycle Q Clear(g_c), s	43.2	49.2	27.3	3.2	13.2	9.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	268	1247	1247	1057	373	332
V/C Ratio(X)	0.44	0.95	0.73	0.15	0.77	0.56
Avail Cap(c_a), veh/h	285	1307	1307	1107	373	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	13.6	9.9	5.7	32.7	31.1
Incr Delay (d2), s/veh	1.1	13.8	2.0	0.1	14.5	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	19.6	8.9	0.8	6.9	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.2	27.4	11.8	5.8	47.2	37.7
LnGrp LOS	C	C	B	A	D	D
Approach Vol, veh/h		1297	1062		475	
Approach Delay, s/veh		27.2	10.9		43.5	
Approach LOS		C	B		D	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		63.3		24.0	63.3
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		60.0		18.0	60.0
Max Q Clear Time (g_c+I1), s		51.2		15.2	29.3
Green Ext Time (p_c), s		6.1		0.5	7.9

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	26	17	0	2	35	728	26	3	918	44
Future Vol, veh/h	33	0	26	17	0	2	35	728	26	3	918	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	0	29	19	0	2	39	809	29	3	1020	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1929	1942	1020	1952	1962	809	1069	0	0	838	0	0
Stage 1	1026	1026	-	887	887	-	-	-	-	-	-	-
Stage 2	903	916	-	1065	1075	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	51	66	290	49	64	384	660	-	-	805	-	-
Stage 1	286	315	-	341	365	-	-	-	-	-	-	-
Stage 2	335	354	-	272	298	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	48	62	290	42	60	384	660	-	-	805	-	-
Mov Cap-2 Maneuver	48	62	-	42	60	-	-	-	-	-	-	-
Stage 1	269	312	-	321	343	-	-	-	-	-	-	-
Stage 2	313	333	-	243	295	-	-	-	-	-	-	-

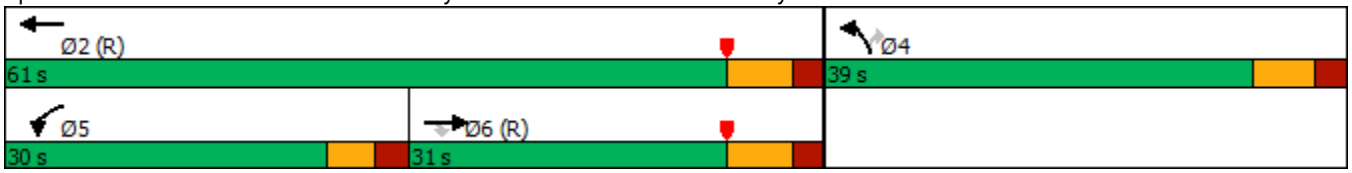
Approach	EB	WB	NB	SB
HCM Control Delay, s	160.5	137.5	0.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	660	-	-	76	46	805	-	-
HCM Lane V/C Ratio	0.059	-	-	0.863	0.459	0.004	-	-
HCM Control Delay (s)	10.8	-	-	160.5	137.5	9.5	0	-
HCM Lane LOS	B	-	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	4.3	1.7	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	623	414	463	1051	519	328
Future Volume (vph)	623	414	463	1051	519	328
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	31.2	31.2	21.2	58.5	27.1	27.1
Actuated g/C Ratio	0.31	0.31	0.21	0.58	0.27	0.27
v/c Ratio	0.75	0.63	0.80	0.64	0.74	0.41
Control Delay	39.2	7.7	47.3	16.6	39.4	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	7.7	47.3	16.6	39.4	4.3
LOS	D	A	D	B	D	A
Approach Delay	26.6			26.0	25.8	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	677	450	503	1142	564	357
v/c Ratio	0.75	0.63	0.80	0.64	0.74	0.41
Control Delay	39.2	7.7	47.3	16.6	39.4	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	7.7	47.3	16.6	39.4	4.3
Queue Length 50th (ft)	206	0	156	240	167	0
Queue Length 95th (ft)	#348	94	209	345	214	34
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	907	715	711	1789	893	968
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.63	0.71	0.64	0.63	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	623	414	463	1051	519	328
Future Volume (veh/h)	623	414	463	1051	519	328
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	677	450	503	1142	564	357
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1041	464	578	1885	702	567
Arrive On Green	0.35	0.35	0.19	0.61	0.25	0.25
Sat Flow, veh/h	3011	1309	3018	3185	2826	2281
Grp Volume(v), veh/h	677	450	503	1142	564	357
Grp Sat Flow(s),veh/h/ln	1467	1309	1509	1552	1413	1141
Q Serve(g_s), s	19.3	33.8	16.2	22.9	18.7	13.9
Cycle Q Clear(g_c), s	19.3	33.8	16.2	22.9	18.7	13.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1041	464	578	1885	702	567
V/C Ratio(X)	0.65	0.97	0.87	0.61	0.80	0.63
Avail Cap(c_a), veh/h	1041	464	721	1885	901	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	31.7	39.2	12.2	35.3	33.5
Incr Delay (d2), s/veh	3.1	34.7	9.4	1.5	4.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	14.0	6.5	7.0	6.4	8.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.2	66.4	48.7	13.6	40.1	35.1
LnGrp LOS	C	E	D	B	D	D
Approach Vol, veh/h	1127			1645	921	
Approach Delay, s/veh	44.6			24.3	38.1	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.0		32.0	25.3	42.8
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		24.9		20.7	18.2	35.8
Green Ext Time (p_c), s		16.1		4.1	1.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

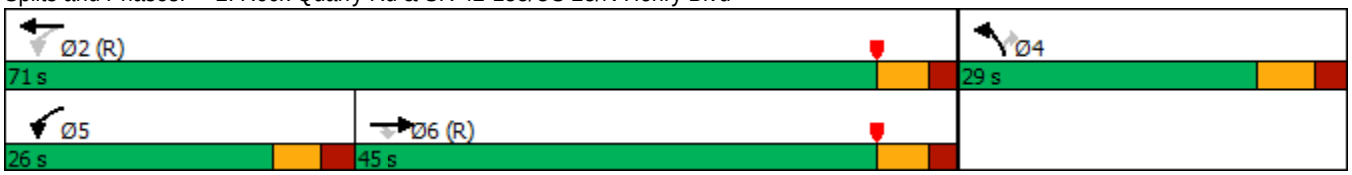
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	863	223	483	1386	174	414
Future Volume (vph)	863	223	483	1386	174	414
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	36.8	36.8	66.7	66.6	20.4	20.4
Actuated g/C Ratio	0.37	0.37	0.67	0.67	0.20	0.20
v/c Ratio	0.84	0.32	0.94	0.75	0.51	0.48
Control Delay	33.4	5.6	51.3	14.5	40.7	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	5.6	51.3	14.5	40.7	5.2
LOS	C	A	D	B	D	A
Approach Delay	27.7			24.0	15.7	
Approach LOS	C			C	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	908	235	508	1459	183	436
v/c Ratio	0.84	0.32	0.94	0.75	0.51	0.48
Control Delay	33.4	5.6	51.3	14.5	40.7	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	5.6	51.3	14.5	40.7	5.2
Queue Length 50th (ft)	293	12	235	288	105	0
Queue Length 95th (ft)	281	32	#476	406	170	42
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1141	759	538	1938	391	955
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.31	0.94	0.75	0.47	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	863	223	483	1386	174	414
Future Volume (veh/h)	863	223	483	1386	174	414
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	908	235	508	1459	183	436
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1215	650	485	1966	356	558
Arrive On Green	0.14	0.14	0.20	0.67	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	2790
Grp Volume(v), veh/h	908	235	508	1459	183	436
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1395
Q Serve(g_s), s	29.5	13.5	20.0	32.6	9.2	14.8
Cycle Q Clear(g_c), s	29.5	13.5	20.0	32.6	9.2	14.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1215	650	485	1966	356	558
V/C Ratio(X)	0.75	0.36	1.05	0.74	0.51	0.78
Avail Cap(c_a), veh/h	1215	650	485	1966	394	617
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	31.3	26.9	10.8	35.7	37.9
Incr Delay (d2), s/veh	3.9	1.5	53.9	2.6	1.6	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	5.9	18.3	8.8	4.1	11.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.2	32.8	80.7	13.4	37.3	44.4
LnGrp LOS	D	C	F	B	D	D
Approach Vol, veh/h	1143			1967	619	
Approach Delay, s/veh	40.3			30.8	42.3	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.1		26.9	26.0	47.1
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s		34.6		16.8	22.0	31.5
Green Ext Time (p_c), s		24.3		1.7	0.0	5.5

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	245	799	18	1365	207	71	33	279	6	228
Future Volume (vph)	245	799	18	1365	207	71	33	279	6	228
Turn Type	Prot	NA	Perm	NA	Perm	Perm	NA	Prot	NA	Perm
Protected Phases	1	6		2			8	7	4	
Permitted Phases			2		2	8				4
Detector Phase	1	6	2	2	2	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	11.0	14.7	14.7
Total Split (s)	16.0	68.8	52.8	52.8	52.8	16.2	16.2	15.0	31.2	31.2
Total Split (%)	16.0%	68.8%	52.8%	52.8%	52.8%	16.2%	16.2%	15.0%	31.2%	31.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.0	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1		6.7	6.0	6.7	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	10.0	61.7	45.7	45.7	45.7		9.5	9.0	24.5	24.5
Actuated g/C Ratio	0.10	0.62	0.46	0.46	0.46		0.10	0.09	0.24	0.24
v/c Ratio	0.85	0.50	0.07	1.06	0.29		1.02	1.08	0.01	0.48
Control Delay	87.0	4.9	22.3	77.4	10.0		117.7	122.5	28.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	87.0	4.9	22.3	77.4	10.0		117.7	122.5	28.8	10.1
LOS	F	A	C	E	B		F	F	C	B
Approach Delay		22.8		67.9			117.7		71.4	
Approach LOS		C		E			F		E	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 55.9	Intersection LOS: E
Intersection Capacity Utilization 78.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





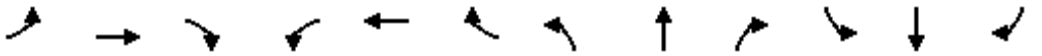
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	255	913	19	1422	216	167	291	6	238
v/c Ratio	0.85	0.50	0.07	1.06	0.29	1.02	1.08	0.01	0.48
Control Delay	87.0	4.9	22.3	77.4	10.0	117.7	122.5	28.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.0	4.9	22.3	77.4	10.0	117.7	122.5	28.8	10.1
Queue Length 50th (ft)	90	46	10	~520	32	~97	~107	3	14
Queue Length 95th (ft)	m#155	70	m16	#690	108	#234	#191	13	80
Internal Link Dist (ft)		3939		643		194		367	
Turn Bay Length (ft)	150		100						
Base Capacity (vph)	299	1836	265	1341	745	163	269	456	495
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.50	0.07	1.06	0.29	1.02	1.08	0.01	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	799	78	18	1365	207	71	33	57	279	6	228
Future Volume (veh/h)	245	799	78	18	1365	207	71	33	57	279	6	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1648	1870	1870	1870	1648	1870	1648
Adj Flow Rate, veh/h	255	832	81	19	1422	216	74	34	59	291	6	238
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	17	2	2	2	17	2	17
Cap, veh/h	304	1699	165	348	1354	638	107	31	47	274	458	342
Arrive On Green	0.10	0.62	0.62	0.31	0.31	0.31	0.10	0.10	0.10	0.09	0.25	0.25
Sat Flow, veh/h	3045	2753	268	611	2962	1397	584	323	496	3045	1870	1397
Grp Volume(v), veh/h	255	452	461	19	1422	216	167	0	0	291	6	238
Grp Sat Flow(s),veh/h/ln	1522	1495	1526	611	1481	1397	1403	0	0	1522	1870	1397
Q Serve(g_s), s	8.2	16.6	16.6	2.2	45.7	12.0	9.0	0.0	0.0	9.0	0.2	15.5
Cycle Q Clear(g_c), s	8.2	16.6	16.6	2.8	45.7	12.0	9.5	0.0	0.0	9.0	0.2	15.5
Prop In Lane	1.00		0.18	1.00		1.00	0.44		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	304	923	941	348	1354	638	185	0	0	274	458	342
V/C Ratio(X)	0.84	0.49	0.49	0.05	1.05	0.34	0.90	0.00	0.00	1.06	0.01	0.70
Avail Cap(c_a), veh/h	304	923	941	348	1354	638	185	0	0	274	458	342
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.80	0.80	0.80	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	10.5	10.5	20.0	34.7	23.0	46.2	0.0	0.0	45.5	28.6	34.4
Incr Delay (d2), s/veh	13.4	1.3	1.3	0.2	36.5	1.1	39.7	0.0	0.0	71.6	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	5.2	5.3	0.3	23.6	4.3	6.2	0.0	0.0	6.1	0.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	11.8	11.8	20.3	71.1	24.1	85.8	0.0	0.0	117.1	28.6	40.4
LnGrp LOS	E	B	B	C	F	C	F	A	A	F	C	D
Approach Vol, veh/h		1168			1657			167			535	
Approach Delay, s/veh		21.8			64.4			85.8			82.0	
Approach LOS		C			E			F			F	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	16.0	52.8		31.2		68.8	15.0	16.2				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1	6.0	6.7				
Max Green Setting (Gmax), s	10.0	45.7		24.5		61.7	9.0	9.5				
Max Q Clear Time (g_c+I1), s	10.2	47.7		17.5		18.6	11.0	11.5				
Green Ext Time (p_c), s	0.0	0.0		0.5		14.8	0.0	0.0				

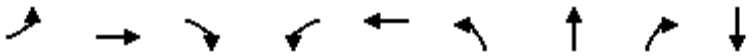
Intersection Summary			
HCM 6th Ctrl Delay		54.0	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	883	145	277	1574	316	16	269	27	46
Future Volume (vph)	5	883	145	277	1574	316	16	269	27	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6	2		8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	53.2	46.1	46.1	62.5	59.8	23.8	23.8	23.8		23.8
Actuated g/C Ratio	0.53	0.46	0.46	0.62	0.60	0.24	0.24	0.24		0.24
v/c Ratio	0.03	0.70	0.23	0.82	0.94	1.00	0.04	0.54		0.24
Control Delay	7.6	24.9	3.5	22.5	31.6	88.3	29.8	14.8		28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	7.6	24.9	3.5	22.5	31.6	88.3	29.8	14.8		28.5
LOS	A	C	A	C	C	F	C	B		C
Approach Delay		21.8			30.3		53.8			28.5
Approach LOS		C			C		D			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 31.7	Intersection LOS: C
Intersection Capacity Utilization 89.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd



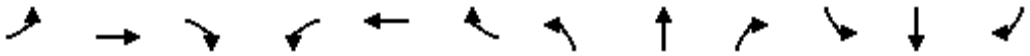


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	5	929	153	292	1664	333	17	283	97
v/c Ratio	0.03	0.70	0.23	0.82	0.94	1.00	0.04	0.54	0.24
Control Delay	7.6	24.9	3.5	22.5	31.6	88.3	29.8	14.8	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	24.9	3.5	22.5	31.6	88.3	29.8	14.8	28.5
Queue Length 50th (ft)	1	240	0	92	566	213	8	44	43
Queue Length 95th (ft)	5	314	34	m96	m#648	#393	26	124	88
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	189	1331	678	358	1767	334	443	527	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.70	0.23	0.82	0.94	1.00	0.04	0.54	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	883	145	277	1574	7	316	16	269	27	46	20
Future Volume (veh/h)	5	883	145	277	1574	7	316	16	269	27	46	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	929	153	292	1657	7	333	17	283	28	48	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	95	1340	598	354	1702	7	401	445	377	128	209	80
Arrive On Green	0.01	0.46	0.46	0.10	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2906	1296	1753	3054	13	1332	1870	1585	344	877	337
Grp Volume(v), veh/h	5	929	153	292	811	853	333	17	283	97	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1296	1753	1495	1572	1332	1870	1585	1558	0	0
Q Serve(g_s), s	0.1	25.3	7.2	8.4	52.5	52.6	19.5	0.7	16.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	25.3	7.2	8.4	52.5	52.6	23.8	0.7	16.6	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.29		0.22
Lane Grp Cap(c), veh/h	95	1340	598	354	833	876	401	445	377	417	0	0
V/C Ratio(X)	0.05	0.69	0.26	0.83	0.97	0.97	0.83	0.04	0.75	0.23	0.00	0.00
Avail Cap(c_a), veh/h	195	1340	598	354	833	876	401	445	377	417	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.14	0.14	0.14	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.5	21.4	16.5	18.3	21.4	21.4	37.9	29.3	35.3	30.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	3.0	1.0	2.4	7.0	6.8	15.1	0.1	9.7	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.3	2.2	3.2	17.9	18.8	9.6	0.3	7.2	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	24.3	17.5	20.7	28.4	28.3	53.0	29.4	45.0	31.3	0.0	0.0
LnGrp LOS	C	C	B	C	C	C	D	C	D	C	A	A
Approach Vol, veh/h		1087			1956			633			97	
Approach Delay, s/veh		23.4			27.2			48.8			31.3	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	62.4		31.2	16.0	52.8		31.2				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	54.6		6.3	10.4	27.3		25.8				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	10.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			29.8									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	22.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	3	119	12	3	16	195	1617	25	9	776	59
Future Vol, veh/h	30	3	119	12	3	16	195	1617	25	9	776	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	32	3	125	13	3	17	205	1702	26	9	817	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2098	2973	409	2540	3009	851	879	0	0	1728	0	0
Stage 1	835	835	-	2112	2112	-	-	-	-	-	-	-
Stage 2	1263	2138	-	428	897	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 30	14	592	14	13	303	764	-	-	361	-	-
Stage 1	328	381	-	52	90	-	-	-	-	-	-	-
Stage 2	180	88	-	575	357	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 16	10	592	~ 7	9	303	764	-	-	361	-	-
Mov Cap-2 Maneuver	~ 16	10	-	~ 7	9	-	-	-	-	-	-	-
Stage 1	240	371	-	38	66	-	-	-	-	-	-	-
Stage 2	118	64	-	438	348	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	253.6	$ 772.4	1.2	0.2
HCM LOS	F	F		

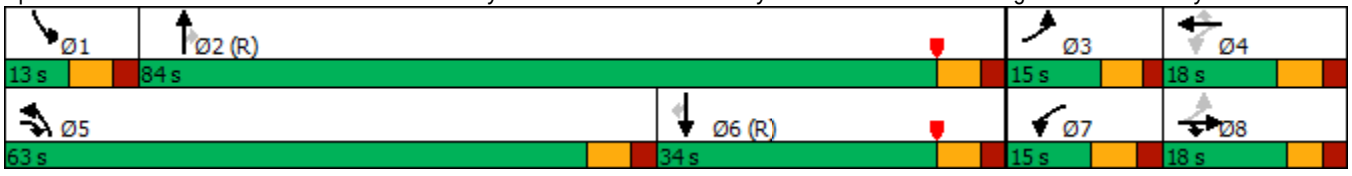
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	764	-	-	15	592	7	303	361	-	-
HCM Lane V/C Ratio	0.269	-	-	2.316	0.212	2.256	0.056	0.026	-	-
HCM Control Delay (s)	11.4	-	-	$ 1122.2	12.3	$ 1577.6	17.6	15.2	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	1.1	-	-	5	0.8	3	0.2	0.1	-	-

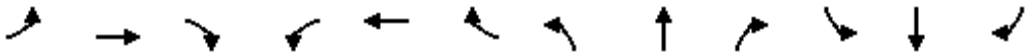
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	78	487	41	62	51	933	642	45	25	324	227
Future Volume (vph)	134	78	487	41	62	51	933	642	45	25	324	227
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	15.0	18.0		15.0	18.0	18.0	63.0	84.0	84.0	13.0	34.0	34.0
Total Split (%)	11.5%	13.8%		11.5%	13.8%	13.8%	48.5%	64.6%	64.6%	10.0%	26.2%	26.2%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	24.8	15.8	73.2	17.9	11.3	11.3	50.7	81.3	81.3	6.5	31.6	31.6
Actuated g/C Ratio	0.19	0.12	0.56	0.14	0.09	0.09	0.39	0.63	0.63	0.05	0.24	0.24
v/c Ratio	0.62	0.36	0.37	0.21	0.40	0.16	0.83	0.37	0.04	0.30	0.47	0.46
Control Delay	44.5	43.7	32.0	44.0	64.1	1.1	42.7	13.7	0.1	68.9	46.5	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	43.7	32.0	44.0	64.1	1.1	42.7	13.7	0.1	68.9	46.5	9.0
LOS	D	D	C	D	E	A	D	B	A	E	D	A
Approach Delay		35.7			38.0			30.0			32.7	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 32.2	Intersection LOS: C
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy

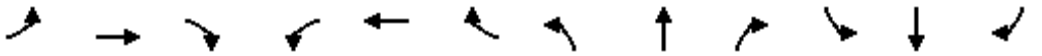




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	140	81	507	43	65	53	972	669	47	26	338	236
v/c Ratio	0.62	0.36	0.37	0.21	0.40	0.16	0.83	0.37	0.04	0.30	0.47	0.46
Control Delay	44.5	43.7	32.0	44.0	64.1	1.1	42.7	13.7	0.1	68.9	46.5	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	43.7	32.0	44.0	64.1	1.1	42.7	13.7	0.1	68.9	46.5	9.0
Queue Length 50th (ft)	105	65	223	29	53	0	372	163	0	22	135	3
Queue Length 95th (ft)	#151	115	289	65	102	0	433	191	0	54	186	77
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	224	225	1471	209	169	331	1293	1828	1057	88	713	510
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.36	0.34	0.21	0.38	0.16	0.75	0.37	0.04	0.30	0.47	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	78	487	41	62	51	933	642	45	25	324	227
Future Volume (veh/h)	134	78	487	41	62	51	933	642	45	25	324	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	140	81	507	43	65	53	972	669	47	26	338	236
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	216	173	1093	183	148	126	1073	1794	978	50	870	410
Arrive On Green	0.02	0.03	0.03	0.05	0.08	0.08	0.35	0.62	0.62	0.03	0.29	0.29
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	140	81	507	43	65	53	972	669	47	26	338	236
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	9.0	5.5	12.0	2.8	4.3	4.1	39.5	14.9	1.5	1.9	11.8	18.7
Cycle Q Clear(g_c), s	9.0	5.5	12.0	2.8	4.3	4.1	39.5	14.9	1.5	1.9	11.8	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	173	1093	183	148	126	1073	1794	978	50	870	410
V/C Ratio(X)	0.65	0.47	0.46	0.24	0.44	0.42	0.91	0.37	0.05	0.52	0.39	0.58
Avail Cap(c_a), veh/h	216	173	1093	206	158	134	1316	1794	978	84	870	410
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	59.9	26.5	50.7	57.1	57.0	40.0	12.4	9.8	62.3	36.6	39.0
Incr Delay (d2), s/veh	6.3	2.3	0.4	0.8	2.4	2.7	8.3	0.6	0.1	21.1	1.3	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.8	5.6	1.3	2.2	1.7	15.4	4.6	0.5	1.1	4.3	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	62.1	26.9	51.5	59.5	59.7	48.3	13.0	9.9	83.4	37.9	44.8
LnGrp LOS	E	E	C	D	E	E	D	B	A	F	D	D
Approach Vol, veh/h		728			161			1688			600	
Approach Delay, s/veh		37.5			57.4			33.2			42.6	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	87.1	15.0	17.3	52.6	45.1	13.3	19.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	6.1	77.1	9.0	11.0	56.2	27.1	8.0	* 12
Max Q Clear Time (g_c+I1), s	3.9	16.9	11.0	6.3	41.5	20.7	4.8	14.0
Green Ext Time (p_c), s	0.0	11.0	0.0	0.2	4.4	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

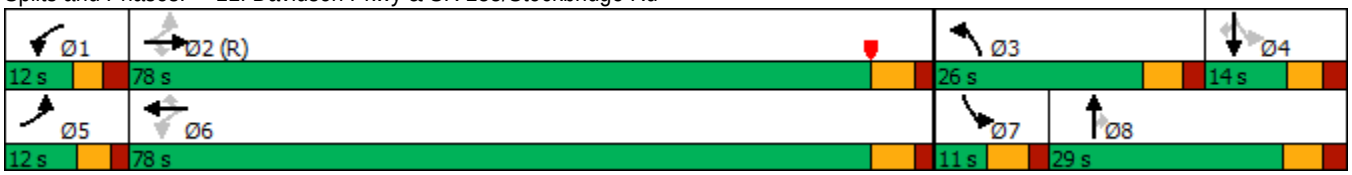
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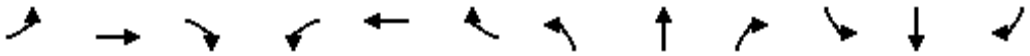
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	844	918	25	1324	53	697	11	25	20	12	95
Future Volume (vph)	76	844	918	25	1324	53	697	11	25	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.3	11.0	14.0	14.0
Total Split (s)	12.0	78.0	78.0	12.0	78.0	78.0	26.0	29.0	29.0	11.0	14.0	14.0
Total Split (%)	9.2%	60.0%	60.0%	9.2%	60.0%	60.0%	20.0%	22.3%	22.3%	8.5%	10.8%	10.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.8	4.0	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	82.2	76.0	76.0	78.0	70.8	70.8	20.4	16.9	16.9	14.7	8.0	8.0
Actuated g/C Ratio	0.63	0.58	0.58	0.60	0.54	0.54	0.16	0.13	0.13	0.11	0.06	0.06
v/c Ratio	0.33	0.29	0.73	0.07	0.49	0.06	0.73	0.05	0.08	0.12	0.11	0.38
Control Delay	10.8	13.0	9.9	4.8	7.0	0.1	56.4	45.4	0.5	37.4	60.1	4.2
Queue Delay	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	10.8	13.0	10.2	4.8	7.4	0.1	56.4	45.4	0.5	37.4	60.1	4.6
LOS	B	B	B	A	A	A	E	D	A	D	E	A
Approach Delay		11.5			7.0			54.3			15.1	
Approach LOS		B			A			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd

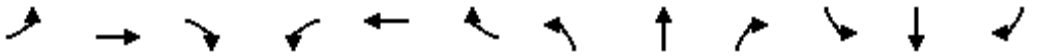




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	80	888	966	26	1394	56	734	12	26	21	13	100
v/c Ratio	0.33	0.29	0.73	0.07	0.49	0.06	0.73	0.05	0.08	0.12	0.11	0.38
Control Delay	10.8	13.0	9.9	4.8	7.0	0.1	56.4	45.4	0.5	37.4	60.1	4.2
Queue Delay	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	10.8	13.0	10.2	4.8	7.4	0.1	56.4	45.4	0.5	37.4	60.1	4.6
Queue Length 50th (ft)	18	92	93	2	34	0	163	9	0	13	11	0
Queue Length 95th (ft)	m47	m214	m498	m6	75	m0	192	27	0	34	33	0
Internal Link Dist (ft)		432			495			439			264	
Turn Bay Length (ft)	75		165	125								
Base Capacity (vph)	249	3093	1334	390	2911	965	1062	328	381	177	114	261
Starvation Cap Reductn	0	0	56	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	788	0	0	0	0	0	0	26
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.29	0.76	0.07	0.66	0.06	0.69	0.04	0.07	0.12	0.11	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	844	918	25	1324	53	697	11	25	20	12	95
Future Volume (veh/h)	76	844	918	25	1324	53	697	11	25	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	888	0	26	1394	56	734	12	26	21	13	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	360	3276		492	3215	978	874	257	218	123	43	
Arrive On Green	0.07	1.00	0.00	0.06	1.00	1.00	0.13	0.14	0.14	0.02	0.02	0.00
Sat Flow, veh/h	1781	5210	1585	1781	5210	1585	6484	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	80	888	0	26	1394	56	734	12	26	21	13	0
Grp Sat Flow(s),veh/h/ln	1781	1303	1585	1781	1303	1585	1621	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.1	0.0	0.0	0.7	0.0	0.0	14.4	0.7	1.9	1.5	0.9	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	0.7	0.0	0.0	14.4	0.7	1.9	1.5	0.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	3276		492	3215	978	874	257	218	123	43	
V/C Ratio(X)	0.22	0.27		0.05	0.43	0.06	0.84	0.05	0.12	0.17	0.30	
Avail Cap(c_a), veh/h	378	3276		531	3215	978	998	327	277	155	115	
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.00	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.6	0.0	0.0	8.1	0.0	0.0	54.9	48.7	49.2	60.2	62.5	0.0
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	0.1	0.0	5.9	0.1	0.2	0.6	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.2	0.0	0.0	6.3	0.3	0.8	0.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.2	0.0	8.1	0.1	0.0	60.7	48.8	49.4	60.8	66.3	0.0
LnGrp LOS	A	A		A	A	A	E	D	D	E	E	
Approach Vol, veh/h		968	A		1476			772			34	A
Approach Delay, s/veh		0.8			0.3			60.2			62.9	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	88.0	23.5	9.3	10.7	86.5	8.7	24.2
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3	6.0	* 6.3
Max Green Setting (Gmax), s	6.5	* 72	20.0	* 8	7.0	* 72	5.0	* 23
Max Q Clear Time (g_c+I1), s	2.7	2.0	16.4	2.9	4.1	2.0	3.5	3.9
Green Ext Time (p_c), s	0.0	15.4	1.2	0.0	0.0	32.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

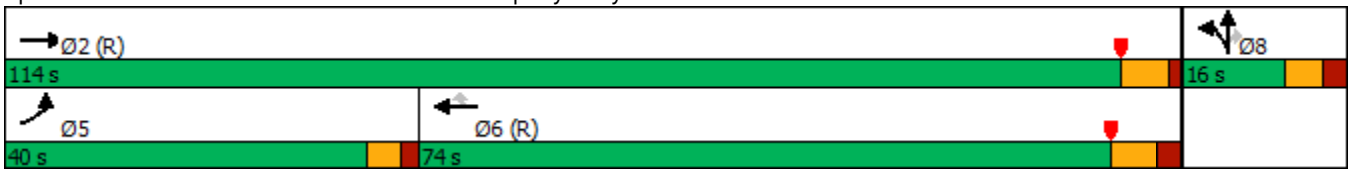
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	552	1561	1692	463	0	282
Future Volume (vph)	552	1561	1692	463	0	282
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	28.1	108.0	73.9	73.9	9.9	9.9
Actuated g/C Ratio	0.22	0.83	0.57	0.57	0.08	0.08
v/c Ratio	0.81	0.50	1.13	0.49	0.35	0.94
Control Delay	44.3	7.5	90.6	7.3	64.8	70.8
Queue Delay	0.0	0.0	0.3	0.4	3.8	0.0
Total Delay	44.3	7.5	91.0	7.7	68.6	70.8
LOS	D	A	F	A	E	E
Approach Delay		17.1	73.1		70.5	
Approach LOS		B	E		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 47.2	Intersection LOS: D
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	600	1697	1839	503	47	307
v/c Ratio	0.81	0.50	1.13	0.49	0.35	0.94
Control Delay	44.3	7.5	90.6	7.3	64.8	70.8
Queue Delay	0.0	0.0	0.3	0.4	3.8	0.0
Total Delay	44.3	7.5	91.0	7.7	68.6	70.8
Queue Length 50th (ft)	243	202	~971	50	38	88
Queue Length 95th (ft)	m307	316	#1168	154	80	#189
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	924	3420	1628	1022	134	328
Starvation Cap Reductn	0	0	156	177	0	0
Spillback Cap Reductn	0	25	70	0	42	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.50	1.25	0.60	0.51	0.94

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	552	1561	0	0	1692	463	43	0	282	0	0	0
Future Volume (veh/h)	552	1561	0	0	1692	463	43	0	282	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	600	1697	0	0	1839	503	47	0	307			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	665	3403	0	0	1704	939	136	0	212			
Arrive On Green	0.38	1.00	0.00	0.00	0.59	0.59	0.08	0.00	0.08			
Sat Flow, veh/h	3456	4271	0	0	2954	1585	1781	0	2790			
Grp Volume(v), veh/h	600	1697	0	0	1839	503	47	0	307			
Grp Sat Flow(s),veh/h/ln	1728	1378	0	0	1439	1585	1781	0	1395			
Q Serve(g_s), s	21.3	0.0	0.0	0.0	77.0	24.6	3.3	0.0	9.9			
Cycle Q Clear(g_c), s	21.3	0.0	0.0	0.0	77.0	24.6	3.3	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	665	3403	0	0	1704	939	136	0	212			
V/C Ratio(X)	0.90	0.50	0.00	0.00	1.08	0.54	0.35	0.00	1.45			
Avail Cap(c_a), veh/h	930	3435	0	0	1704	939	136	0	212			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.47	0.47	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.8	0.0	0.0	0.0	26.5	15.8	57.0	0.0	60.0			
Incr Delay (d2), s/veh	4.7	0.2	0.0	0.0	44.8	1.8	1.5	0.0	224.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.4	0.1	0.0	0.0	34.0	8.7	1.5	0.0	10.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	0.2	0.0	0.0	71.3	17.6	58.5	0.0	284.8			
LnGrp LOS	D	A	A	A	F	B	E	A	F			
Approach Vol, veh/h		2297			2342			354				
Approach Delay, s/veh		11.5			59.8			254.8				
Approach LOS		B			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			30.0	84.0		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			23.3	79.0		11.9				
Green Ext Time (p_c), s		52.1			1.8	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

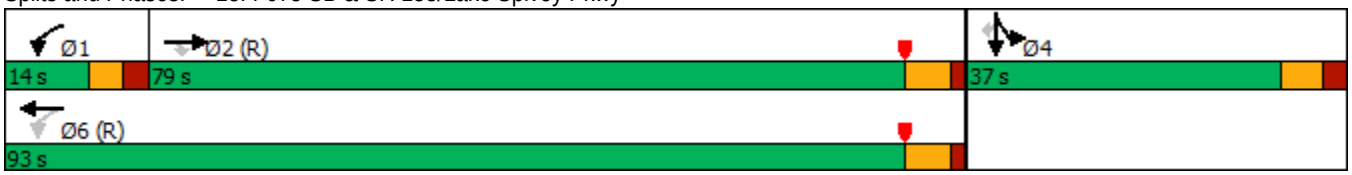
Notes

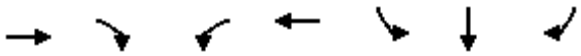
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1760	74	244	1498	369	0	536
Future Volume (vph)	1760	74	244	1498	369	0	536
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	71.8	71.8	87.4	87.4	30.2	30.2	30.2
Actuated g/C Ratio	0.55	0.55	0.67	0.67	0.23	0.23	0.23
v/c Ratio	0.85	0.09	1.40	0.85	0.52	0.52	0.91
Control Delay	20.2	3.3	220.6	11.0	48.9	49.0	68.1
Queue Delay	0.3	0.0	0.0	15.9	0.0	0.0	0.0
Total Delay	20.6	3.3	220.6	26.9	48.9	49.0	68.1
LOS	C	A	F	C	D	D	E
Approach Delay	19.9			54.0		60.3	
Approach LOS	B			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay: 41.3	Intersection LOS: D
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





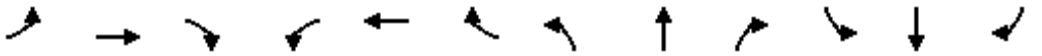
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1934	81	268	1646	202	203	589
v/c Ratio	0.85	0.09	1.40	0.85	0.52	0.52	0.91
Control Delay	20.2	3.3	220.6	11.0	48.9	49.0	68.1
Queue Delay	0.3	0.0	0.0	15.9	0.0	0.0	0.0
Total Delay	20.6	3.3	220.6	26.9	48.9	49.0	68.1
Queue Length 50th (ft)	297	5	~266	761	156	157	275
Queue Length 95th (ft)	335	m7	m#219	m2	243	243	#389
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2315	925	191	1931	397	397	658
Starvation Cap Reductn	77	0	0	263	0	0	0
Spillback Cap Reductn	0	0	0	316	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.09	1.40	1.02	0.51	0.51	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1760	74	244	1498	0	0	0	0	369	0	536
Future Volume (veh/h)	0	1760	74	244	1498	0	0	0	0	369	0	536
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1870	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1934	81	268	1646	0				405	0	589
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	2	2	26	0				2	2	2
Cap, veh/h	0	2416	926	290	1991	0				757	0	674
Arrive On Green	0.00	1.00	1.00	0.06	0.69	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1585	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1934	81	268	1646	0				405	0	589
Grp Sat Flow(s),veh/h/ln	0	1378	1585	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	7.8	53.5	0.0				13.1	0.0	23.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	53.5	0.0				13.1	0.0	23.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2416	926	290	1991	0				757	0	674
V/C Ratio(X)	0.00	0.80	0.09	0.92	0.83	0.00				0.53	0.00	0.87
Avail Cap(c_a), veh/h	0	2416	926	290	1991	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.51	0.51	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.6	14.4	0.0				45.5	0.0	49.5
Incr Delay (d2), s/veh	0.0	1.5	0.1	5.0	0.4	0.0				0.7	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	3.1	14.7	0.0				5.8	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.5	0.1	19.6	14.8	0.0				46.2	0.0	60.3
LnGrp LOS	A	A	A	B	B	A				D	A	E
Approach Vol, veh/h		2015			1914						994	
Approach Delay, s/veh		1.4			15.5						54.5	
Approach LOS		A			B						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.0	81.9		34.1		95.9						
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9						
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1						
Max Q Clear Time (g_c+I1), s	9.8	2.0		25.4		55.5						
Green Ext Time (p_c), s	0.0	52.1		2.3		24.7						

Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									

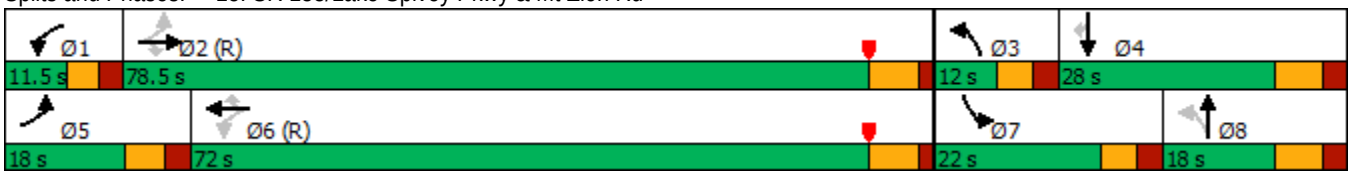
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	167	1439	84	31	1633	249	76	28	253	27	280
Future Volume (vph)	167	1439	84	31	1633	249	76	28	253	27	280
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8				4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	87.5	80.4	80.4	76.4	69.4	69.4	14.8	9.5	16.6	17.1	17.1
Actuated g/C Ratio	0.67	0.62	0.62	0.59	0.53	0.53	0.11	0.07	0.13	0.13	0.13
v/c Ratio	0.84	0.79	0.09	0.19	1.04	0.28	0.48	0.40	0.63	0.12	0.84
Control Delay	62.4	15.5	0.2	11.6	51.4	5.0	51.3	39.1	61.1	48.6	42.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	15.5	0.2	11.6	51.4	5.0	51.3	39.1	61.1	48.6	42.4
LOS	E	B	A	B	D	A	D	D	E	D	D
Approach Delay		19.4			44.7			46.1		51.2	
Approach LOS		B			D			D		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 84.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





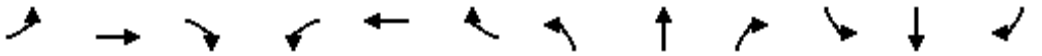
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	182	1564	91	34	1775	271	83	63	275	29	304
v/c Ratio	0.84	0.79	0.09	0.19	1.04	0.28	0.48	0.40	0.63	0.12	0.84
Control Delay	62.4	15.5	0.2	11.6	51.4	5.0	51.3	39.1	61.1	48.6	42.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	15.5	0.2	11.6	51.4	5.0	51.3	39.1	61.1	48.6	42.4
Queue Length 50th (ft)	89	693	0	9	~883	27	55	24	115	21	104
Queue Length 95th (ft)	m#208	603	m0	m13	#1024	m49	100	71	163	51	#222
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	224	1976	1048	175	1706	954	174	174	452	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.79	0.09	0.19	1.04	0.28	0.48	0.36	0.61	0.10	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1439	84	31	1633	249	76	28	30	253	27	280
Future Volume (veh/h)	167	1439	84	31	1633	249	76	28	30	253	27	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	1564	91	34	1775	271	83	30	33	275	29	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	220	1843	901	273	1719	840	254	90	99	332	301	255
Arrive On Green	0.13	1.00	1.00	0.07	1.00	1.00	0.05	0.11	0.11	0.10	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	3456	1870	1585
Grp Volume(v), veh/h	182	1564	91	34	1775	271	83	0	63	275	29	304
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1728	1870	1585
Q Serve(g_s), s	6.2	0.0	0.0	1.1	0.0	0.0	5.4	0.0	4.4	10.2	1.7	20.9
Cycle Q Clear(g_c), s	6.2	0.0	0.0	1.1	0.0	0.0	5.4	0.0	4.4	10.2	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	220	1843	901	273	1719	840	254	0	189	332	301	255
V/C Ratio(X)	0.83	0.85	0.10	0.12	1.03	0.32	0.33	0.00	0.33	0.83	0.10	1.19
Avail Cap(c_a), veh/h	265	1843	901	297	1719	840	254	0	189	425	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.43	0.43	0.43	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	0.0	12.2	0.0	0.0	48.5	0.0	53.4	57.7	46.5	54.6
Incr Delay (d2), s/veh	10.9	3.2	0.1	0.1	23.5	0.4	0.7	0.0	2.2	10.3	0.3	118.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.8	0.0	0.4	5.6	0.1	2.5	0.0	2.0	4.9	0.8	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	3.2	0.1	12.3	23.5	0.4	49.2	0.0	55.5	68.0	46.8	173.3
LnGrp LOS	C	A	A	B	F	A	D	A	E	E	D	F
Approach Vol, veh/h		1837			2080			146			608	
Approach Delay, s/veh		6.2			20.3			51.9			119.6	
Approach LOS		A			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	14.7	75.3	18.5	21.5
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.0	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.4	22.9	8.2	2.0	12.2	6.4
Green Ext Time (p_c), s	0.0	41.7	0.0	0.0	0.1	48.9	0.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

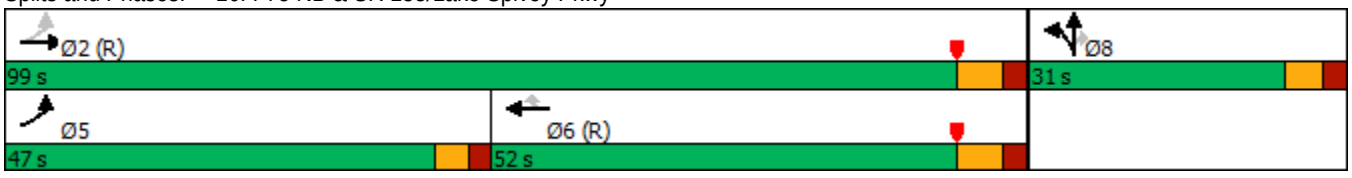
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	680	1586	1119	931	304	0	216
Future Volume (vph)	680	1586	1119	931	304	0	216
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	100.5	99.1	45.1	45.1	17.9	17.9	17.9
Actuated g/C Ratio	0.77	0.76	0.35	0.35	0.14	0.14	0.14
v/c Ratio	1.04	0.72	1.11	1.21	0.72	0.72	0.83
Control Delay	61.9	15.7	89.2	118.4	70.4	70.4	58.8
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	17.3	89.2	118.4	70.4	70.4	58.8
LOS	E	B	F	F	E	E	E
Approach Delay		30.7	102.5			65.6	
Approach LOS		C	F			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 64.9	Intersection LOS: E
Intersection Capacity Utilization 119.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





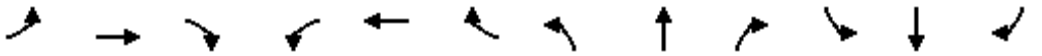
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	747	1743	1230	1023	167	167	237
v/c Ratio	1.04	0.72	1.11	1.21	0.72	0.72	0.83
Control Delay	61.9	15.7	89.2	118.4	70.4	70.4	58.8
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	17.3	89.2	118.4	70.4	70.4	58.8
Queue Length 50th (ft)	~636	538	~613	~487	143	143	133
Queue Length 95th (ft)	m#727	m588	m#608	m#496	213	213	217
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	718	2435	1108	842	321	321	367
Starvation Cap Reductn	0	477	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.89	1.11	1.21	0.52	0.52	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	680	1586	0	0	1119	931	304	0	216	0	0	0
Future Volume (veh/h)	680	1586	0	0	1119	931	304	0	216	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	747	1743	0	0	1230	0	334	0	237			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	624	2382	0	0	1209		590	0	263			
Arrive On Green	0.32	0.73	0.00	0.00	0.75	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	3563	0	1585			
Grp Volume(v), veh/h	747	1743	0	0	1230	0	334	0	237			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	40.1	0.0	0.0	48.5	0.0	11.2	0.0	19.1			
Cycle Q Clear(g_c), s	41.5	40.1	0.0	0.0	48.5	0.0	11.2	0.0	19.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	624	2382	0	0	1209		590	0	263			
V/C Ratio(X)	1.20	0.73	0.00	0.00	1.02		0.57	0.00	0.90			
Avail Cap(c_a), veh/h	624	2382	0	0	1209		682	0	304			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.16	0.16	0.00	0.00	0.11	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	9.9	0.0	0.0	16.5	0.0	49.9	0.0	53.2			
Incr Delay (d2), s/veh	91.4	0.3	0.0	0.0	13.3	0.0	0.3	0.0	24.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	34.9	11.5	0.0	0.0	7.7	0.0	4.8	0.0	9.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.4	10.2	0.0	0.0	29.9	0.0	50.2	0.0	77.5			
LnGrp LOS	F	B	A	A	F		D	A	E			
Approach Vol, veh/h		2490			1230	A		571				
Approach Delay, s/veh		46.3			29.9			61.6				
Approach LOS		D			C			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		102.4			47.0	55.4		27.6				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		42.1			43.5	50.5		21.1				
Green Ext Time (p_c), s		36.9			0.0	0.0		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	43.6
HCM 6th LOS	D

Notes

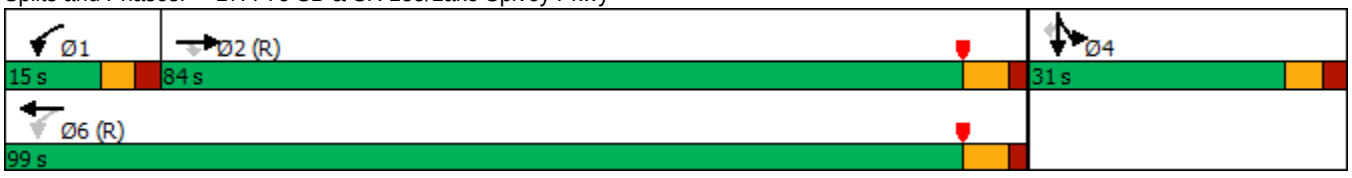
User approved volume balancing among the lanes for turning movement.

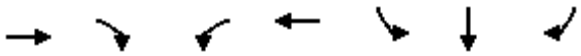
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1610	323	117	1257	673	0	266
Future Volume (vph)	1610	323	117	1257	673	0	266
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	78.2	78.2	93.2	92.7	24.8	24.8	24.8
Actuated g/C Ratio	0.60	0.60	0.72	0.71	0.19	0.19	0.19
v/c Ratio	0.93	0.33	0.74	0.61	1.17	1.17	0.46
Control Delay	23.3	2.1	52.4	1.9	150.1	150.1	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.9	0.0
Total Delay	23.3	2.1	52.4	1.9	151.1	151.1	26.2
LOS	C	A	D	A	F	F	C
Approach Delay	19.8			6.2		115.7	
Approach LOS	B			A		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 36.6	Intersection LOS: D
Intersection Capacity Utilization 119.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





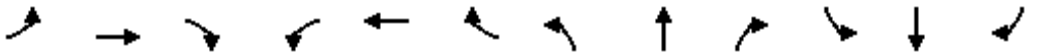
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1789	359	130	1397	374	374	296
v/c Ratio	0.93	0.33	0.74	0.61	1.17	1.17	0.46
Control Delay	23.3	2.1	52.4	1.9	150.1	150.1	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.9	0.0
Total Delay	23.3	2.1	52.4	1.9	151.1	151.1	26.2
Queue Length 50th (ft)	309	19	54	0	~393	~393	63
Queue Length 95th (ft)	m334	m19	m58	m0	#602	#602	114
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1922	1095	182	2278	320	320	646
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	24	24	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.33	0.71	0.61	1.26	1.26	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1610	323	117	1257	0	0	0	0	673	0	266
Future Volume (veh/h)	0	1610	323	117	1257	0	0	0	0	673	0	266
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1789	359	130	1397	0				748	0	296
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2020	987	253	2313	0				680	0	605
Arrive On Green	0.00	1.00	1.00	0.05	0.71	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	3170
Grp Volume(v), veh/h	0	1789	359	130	1397	0				748	0	296
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.2	28.2	0.0				24.8	0.0	10.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.2	28.2	0.0				24.8	0.0	10.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2020	987	253	2313	0				680	0	605
V/C Ratio(X)	0.00	0.89	0.36	0.51	0.60	0.00				1.10	0.00	0.49
Avail Cap(c_a), veh/h	0	2020	987	297	2313	0				680	0	605
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.24	0.24	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.1	9.4	0.0				52.6	0.0	46.9
Incr Delay (d2), s/veh	0.0	1.6	0.2	0.1	0.1	0.0				65.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.1	1.1	8.4	0.0				16.8	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.6	0.2	7.2	9.5	0.0				117.9	0.0	47.6
LnGrp LOS	A	A	A	A	A	A				F	A	D
Approach Vol, veh/h		2148			1527						1044	
Approach Delay, s/veh		1.4			9.3						98.0	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	87.3		31.0		99.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.2	2.0		26.8		30.2
Green Ext Time (p_c), s	0.1	57.8		0.0		31.5

Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

Notes

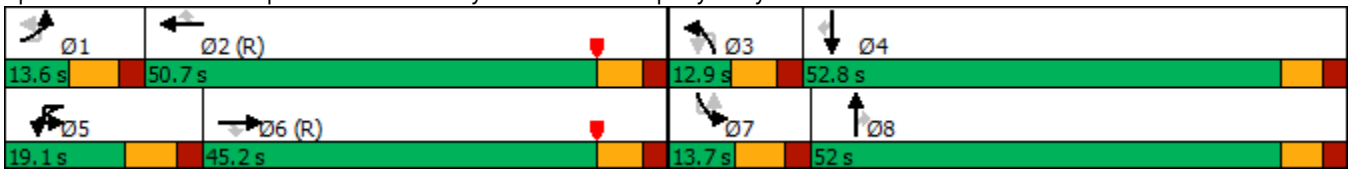
User approved volume balancing among the lanes for turning movement.

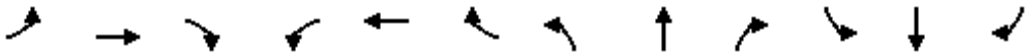
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	966	73	253	1010	146	69	191	715	156	82	66
Future Volume (vph)	79	966	73	253	1010	146	69	191	715	156	82	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	7.7	45.0	45.0	14.8	52.1	52.1	6.0	35.3	35.3	6.3	38.7	38.7
Actuated g/C Ratio	0.06	0.35	0.35	0.11	0.40	0.40	0.05	0.27	0.27	0.05	0.30	0.30
v/c Ratio	0.43	0.99	0.12	0.71	0.87	0.22	0.48	0.22	0.84	1.03	0.09	0.13
Control Delay	61.3	60.7	3.2	81.2	33.0	3.8	71.0	35.7	38.5	137.5	32.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	60.7	3.2	81.2	33.0	3.8	71.0	35.7	38.5	137.5	32.1	0.5
LOS	E	E	A	F	C	A	E	D	D	F	C	A
Approach Delay		57.0			38.6			40.3			79.1	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 47.7	Intersection LOS: D
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





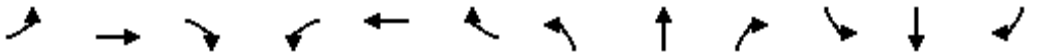
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	1062	80	278	1110	160	76	210	786	171	90	73
v/c Ratio	0.43	0.99	0.12	0.71	0.87	0.22	0.48	0.22	0.84	1.03	0.09	0.13
Control Delay	61.3	60.7	3.2	81.2	33.0	3.8	71.0	35.7	38.5	137.5	32.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	60.7	3.2	81.2	33.0	3.8	71.0	35.7	38.5	137.5	32.1	0.5
Queue Length 50th (ft)	38	~522	4	127	233	7	32	72	255	~79	29	0
Queue Length 95th (ft)	m62	#713	m14	#210	#656	33	59	94	307	#156	46	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	202	1077	646	390	1281	730	158	1235	1132	166	1257	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.99	0.12	0.71	0.87	0.22	0.48	0.17	0.69	1.03	0.07	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	966	73	253	1010	146	69	191	715	156	82	66
Future Volume (veh/h)	79	966	73	253	1010	146	69	191	715	156	82	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	1062	80	278	1110	160	76	210	786	171	90	73
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	153	1052	528	308	1226	599	149	1100	863	167	1132	505
Arrive On Green	0.09	0.67	0.67	0.18	0.76	0.76	0.04	0.31	0.31	0.05	0.32	0.32
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	87	1062	80	278	1110	160	76	210	786	171	90	73
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	3.1	43.3	2.4	10.2	34.4	4.0	2.8	5.6	35.2	6.3	2.3	4.3
Cycle Q Clear(g_c), s	3.1	43.3	2.4	10.2	34.4	4.0	2.8	5.6	35.2	6.3	2.3	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	1052	528	308	1226	599	149	1100	863	167	1132	505
V/C Ratio(X)	0.57	1.01	0.15	0.90	0.91	0.27	0.51	0.19	0.91	1.02	0.08	0.14
Avail Cap(c_a), veh/h	162	1052	528	308	1226	599	159	1241	974	167	1263	563
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	21.7	14.9	52.8	14.1	10.4	60.8	32.9	43.2	61.8	31.0	31.6
Incr Delay (d2), s/veh	3.0	25.8	0.4	23.2	9.0	0.9	2.7	0.1	11.5	75.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	11.6	0.9	5.0	6.3	1.4	1.3	2.4	13.1	4.5	1.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	47.5	15.3	76.0	23.1	11.2	63.5	33.0	54.7	137.0	31.0	31.8
LnGrp LOS	E	F	B	E	C	B	E	C	D	F	C	C
Approach Vol, veh/h		1229			1548			1072			334	
Approach Delay, s/veh		46.4			31.4			51.1			85.5	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	56.2	12.5	48.0	19.1	50.4	13.7	46.8
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.1	36.4	4.8	6.3	12.2	45.3	8.3	37.2
Green Ext Time (p_c), s	0.0	5.7	0.0	0.8	0.0	0.0	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	154.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	323	351	126	129	94
Future Vol, veh/h	200	323	351	126	129	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	328	530	575	207	211	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	782	0	-	0	1761	575
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	1186	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	831	-	-	-	~ 91	512
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	286	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	831	-	-	-	~ 55	512
Mov Cap-2 Maneuver	-	-	-	-	~ 55	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	286	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	$ 835.7
HCM LOS			F

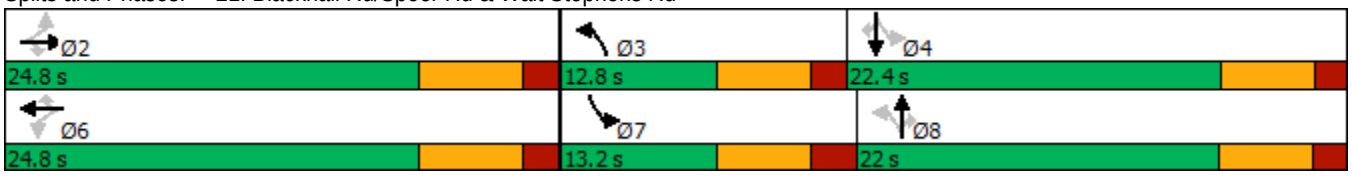
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	831	-	-	-	55	512
HCM Lane V/C Ratio	0.395	-	-	-	3.845	0.301
HCM Control Delay (s)	12.1	-	-	-	$ 1433.8	15
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	1.9	-	-	-	23	1.3

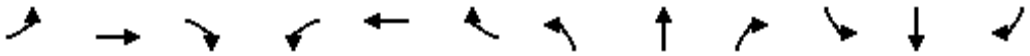
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	316	52	124	328	589	46	355	106	221	74	15
Future Volume (vph)	30	316	52	124	328	589	46	355	106	221	74	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	17.8	17.8	17.8	17.8	17.8	17.8	22.2	15.1	15.1	24.6	21.0	21.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.26	0.26	0.42	0.36	0.36
v/c Ratio	0.15	0.62	0.10	0.59	0.66	0.51	0.09	0.82	0.22	0.67	0.12	0.03
Control Delay	17.2	23.4	0.3	30.5	24.4	3.2	8.9	37.2	2.7	21.7	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	23.4	0.3	30.5	24.4	3.2	8.9	37.2	2.7	21.7	16.3	0.1
LOS	B	C	A	C	C	A	A	D	A	C	B	A
Approach Delay		19.9			13.1			27.5			19.3	
Approach LOS		B			B			C			B	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 58.3		
Natural Cycle: 60		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.82		
Intersection Signal Delay: 18.4	Intersection LOS: B	
Intersection Capacity Utilization 80.8%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd

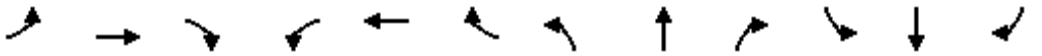




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	355	58	139	369	662	52	399	119	248	83	17
v/c Ratio	0.15	0.62	0.10	0.59	0.66	0.51	0.09	0.82	0.22	0.67	0.12	0.03
Control Delay	17.2	23.4	0.3	30.5	24.4	3.2	8.9	37.2	2.7	21.7	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	23.4	0.3	30.5	24.4	3.2	8.9	37.2	2.7	21.7	16.3	0.1
Queue Length 50th (ft)	9	108	0	42	114	0	9	133	0	50	23	0
Queue Length 95th (ft)	27	183	0	#108	191	33	24	#257	18	#116	51	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	235	593	610	245	587	1329	553	519	560	371	671	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.60	0.10	0.57	0.63	0.50	0.09	0.77	0.21	0.67	0.12	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	316	52	124	328	589	46	355	106	221	74	15
Future Volume (veh/h)	30	316	52	124	328	589	46	355	106	221	74	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	355	58	139	369	662	52	399	119	248	83	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	204	593	503	275	589	878	567	465	394	377	575	487
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.25	0.25	0.12	0.31	0.31
Sat Flow, veh/h	547	1870	1585	965	1856	2768	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	34	355	58	139	369	662	52	399	119	248	83	17
Grp Sat Flow(s),veh/h/ln	547	1870	1585	965	1856	1384	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.3	9.3	1.5	8.3	9.9	12.5	1.2	11.9	3.6	6.0	1.9	0.4
Cycle Q Clear(g_c), s	13.2	9.3	1.5	17.6	9.9	12.5	1.2	11.9	3.6	6.0	1.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	593	503	275	589	878	567	465	394	377	575	487
V/C Ratio(X)	0.17	0.60	0.12	0.50	0.63	0.75	0.09	0.86	0.30	0.66	0.14	0.03
Avail Cap(c_a), veh/h	204	593	503	275	589	878	660	520	440	377	575	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	16.8	14.1	24.2	17.0	17.9	14.0	20.9	17.8	15.1	14.6	14.1
Incr Delay (d2), s/veh	0.8	2.5	0.2	3.1	3.0	4.4	0.1	12.4	0.4	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.7	0.5	1.9	3.9	3.8	0.4	6.0	1.2	2.3	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	19.3	14.3	27.3	20.0	22.3	14.1	33.3	18.2	19.2	14.7	14.2
LnGrp LOS	C	B	B	C	B	C	B	C	B	B	B	B
Approach Vol, veh/h		447			1170			570			348	
Approach Delay, s/veh		19.0			22.2			28.4			17.9	
Approach LOS		B			C			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	9.8	23.7		24.8	13.2	20.3				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		15.2	3.2	3.9		19.6	8.0	13.9				
Green Ext Time (p_c), s		1.2	0.0	0.3		0.0	0.0	0.6				

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

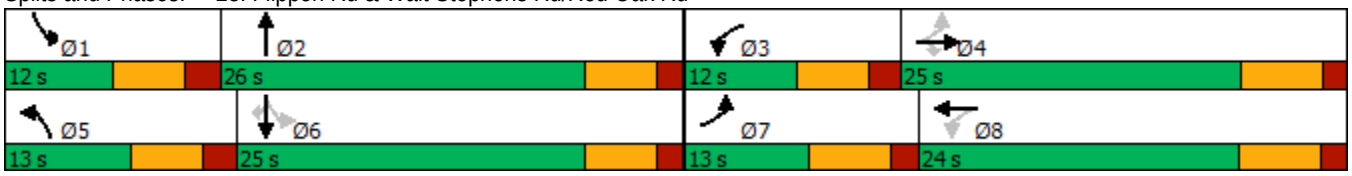
Notes

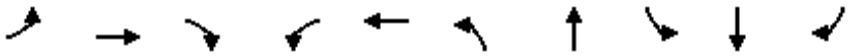
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	247	176	432	20	230	364	356	21	303	312
Future Volume (vph)	247	176	432	20	230	364	356	21	303	312
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8				6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	26.0	23.5	23.5	21.3	14.9	7.0	26.2	23.2	17.6	17.6
Actuated g/C Ratio	0.37	0.33	0.33	0.30	0.21	0.10	0.37	0.33	0.25	0.25
v/c Ratio	0.79	0.32	0.57	0.05	0.73	1.18	0.60	0.07	0.74	0.54
Control Delay	37.6	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	6.3
LOS	D	C	A	B	D	F	C	B	D	A
Approach Delay		18.1			35.9		81.6		20.7	
Approach LOS		B			D		F		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 70.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 39.4	Intersection LOS: D
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



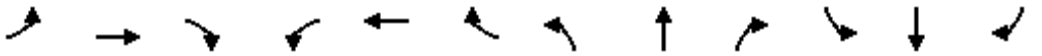


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	274	196	480	22	285	404	414	23	337	347
v/c Ratio	0.79	0.32	0.57	0.05	0.73	1.18	0.60	0.07	0.74	0.54
Control Delay	37.6	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	6.3
Queue Length 50th (ft)	86	58	0	6	117	~119	129	6	138	0
Queue Length 95th (ft)	#170	134	71	19	196	#208	#325	19	#251	60
Internal Link Dist (ft)		1906			3175		1869		1364	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	345	622	848	407	470	343	689	325	506	681
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.32	0.57	0.05	0.61	1.18	0.60	0.07	0.67	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	247	176	432	20	230	26	364	356	16	21	303	312
Future Volume (veh/h)	247	176	432	20	230	26	364	356	16	21	303	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	274	196	0	22	256	29	404	396	18	23	337	347
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	327	495		368	311	35	352	591	27	294	482	409
Arrive On Green	0.10	0.26	0.00	0.03	0.19	0.19	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	1781	1870	1585	1767	1637	185	3456	1775	81	1753	1841	1560
Grp Volume(v), veh/h	274	196	0	22	0	285	404	0	414	23	337	347
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1822	1728	0	1856	1753	1841	1560
Q Serve(g_s), s	6.9	5.9	0.0	0.7	0.0	10.3	7.0	0.0	13.2	0.6	11.4	14.5
Cycle Q Clear(g_c), s	6.9	5.9	0.0	0.7	0.0	10.3	7.0	0.0	13.2	0.6	11.4	14.5
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	327	495		368	0	346	352	0	617	294	482	409
V/C Ratio(X)	0.84	0.40		0.06	0.00	0.82	1.15	0.00	0.67	0.08	0.70	0.85
Avail Cap(c_a), veh/h	327	517		474	0	474	352	0	617	393	519	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	20.8	0.0	21.2	0.0	26.7	30.9	0.0	19.7	17.9	22.9	24.1
Incr Delay (d2), s/veh	17.2	0.5	0.0	0.1	0.0	8.2	94.7	0.0	3.7	0.1	5.2	15.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	2.4	0.0	0.3	0.0	5.0	7.3	0.0	5.5	0.2	5.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	21.3	0.0	21.3	0.0	35.0	125.6	0.0	23.4	18.0	28.1	39.7
LnGrp LOS	D	C		C	A	C	F	A	C	B	C	D
Approach Vol, veh/h		470	A		307			818			707	
Approach Delay, s/veh		32.2			34.0			73.9			33.5	
Approach LOS		C			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	28.5	7.9	24.3	13.0	23.6	13.0	19.2
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.6	15.2	2.7	7.9	9.0	16.5	8.9	12.3
Green Ext Time (p_c), s	0.0	1.7	0.0	0.6	0.0	1.5	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	22	21	0	54	8	647	8	25	500	16
Future Vol, veh/h	34	0	22	21	0	54	8	647	8	25	500	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	4	4	0
Mvmt Flow	38	0	24	23	0	60	9	719	9	28	556	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1384	1358	556	1370	1367	719	574	0	0	728	0	0
Stage 1	612	612	-	737	737	-	-	-	-	-	-	-
Stage 2	772	746	-	633	630	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	122	150	534	124	148	428	1009	-	-	866	-	-
Stage 1	484	487	-	410	428	-	-	-	-	-	-	-
Stage 2	395	424	-	468	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	102	144	534	115	142	428	1009	-	-	866	-	-
Mov Cap-2 Maneuver	102	144	-	115	142	-	-	-	-	-	-	-
Stage 1	480	471	-	406	424	-	-	-	-	-	-	-
Stage 2	337	420	-	432	463	-	-	-	-	-	-	-

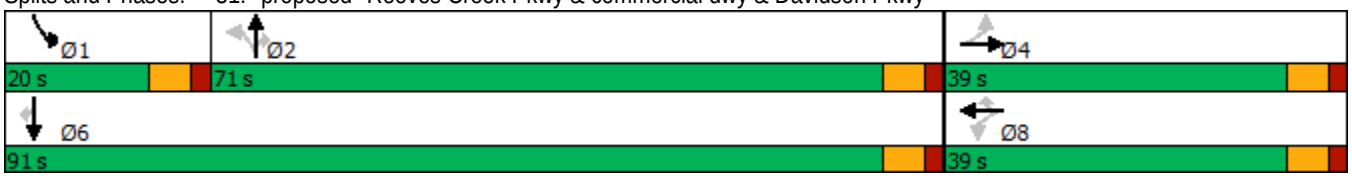
Approach	EB	WB	NB	SB
HCM Control Delay, s	41	23	0.1	0.4
HCM LOS	E	C		

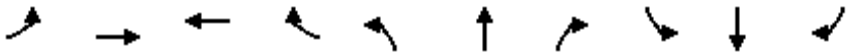
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1009	-	-	102	534	115	428	866	-	-
HCM Lane V/C Ratio	0.009	-	-	0.37	0.046	0.203	0.14	0.032	-	-
HCM Control Delay (s)	8.6	-	-	59.7	12.1	44.1	14.8	9.3	-	-
HCM Lane LOS	A	-	-	F	B	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.5	0.1	0.7	0.5	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	33	13	148	18	280	6	403	56	169	668	45
Future Volume (vph)	33	13	148	18	280	6	403	56	169	668	45
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4		8			2		1	6	
Permitted Phases	4		8		8	2		2			6
Detector Phase	4	4	8	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	71.0	71.0	71.0	20.0	91.0	91.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	54.6%	54.6%	54.6%	15.4%	70.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	21.1	21.1		21.1	21.1	67.9	67.9	67.9	11.4	85.3	85.3
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.57	0.57	0.57	0.10	0.72	0.72
v/c Ratio	0.23	0.05		0.74	0.57	0.02	0.41	0.06	0.56	0.54	0.04
Control Delay	43.9	32.6		63.7	8.7	14.7	17.1	2.6	58.6	10.5	2.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	32.6		63.7	8.7	14.7	17.1	2.6	58.6	10.5	2.0
LOS	D	C		E	A	B	B	A	E	B	A
Approach Delay		40.2		29.2			15.3			19.3	
Approach LOS		D		C			B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 118.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 70.1%	ICU Level of Service C
Analysis Period (min) 15	

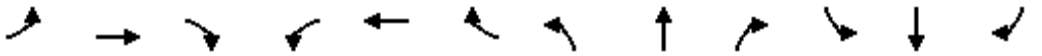
Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	37	18	184	311	7	448	62	188	742	50
v/c Ratio	0.23	0.05	0.74	0.57	0.02	0.41	0.06	0.56	0.54	0.04
Control Delay	43.9	32.6	63.7	8.7	14.7	17.1	2.6	58.6	10.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	32.6	63.7	8.7	14.7	17.1	2.6	58.6	10.5	2.0
Queue Length 50th (ft)	24	9	134	0	2	180	0	71	224	0
Queue Length 95th (ft)	56	30	214	74	11	327	17	117	432	14
Internal Link Dist (ft)		448	896			799			1580	
Turn Bay Length (ft)										
Base Capacity (vph)	258	516	390	675	418	1089	958	415	1367	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.03	0.47	0.46	0.02	0.41	0.06	0.45	0.54	0.04

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	13	4	148	18	280	6	403	56	169	668	45
Future Volume (veh/h)	33	13	4	148	18	280	6	403	56	169	668	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	14	4	164	20	311	7	448	62	188	742	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	305	87	324	33	346	398	1080	915	249	1307	1108
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.57	0.57	0.57	0.07	0.69	0.69
Sat Flow, veh/h	1066	1421	406	1251	153	1610	696	1900	1610	3510	1900	1610
Grp Volume(v), veh/h	37	0	18	184	0	311	7	448	62	188	742	50
Grp Sat Flow(s),veh/h/ln	1066	0	1827	1404	0	1610	696	1900	1610	1755	1900	1610
Q Serve(g_s), s	4.0	0.0	1.0	14.2	0.0	23.2	0.6	16.5	2.1	6.5	24.7	1.2
Cycle Q Clear(g_c), s	19.2	0.0	1.0	15.1	0.0	23.2	10.6	16.5	2.1	6.5	24.7	1.2
Prop In Lane	1.00		0.22	0.89		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	0	393	357	0	346	398	1080	915	249	1307	1108
V/C Ratio(X)	0.24	0.00	0.05	0.52	0.00	0.90	0.02	0.41	0.07	0.76	0.57	0.05
Avail Cap(c_a), veh/h	212	0	488	433	0	430	398	1080	915	398	1307	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	0.0	38.5	44.4	0.0	47.2	16.4	15.1	12.0	56.4	9.9	6.2
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.2	0.0	18.5	0.1	1.2	0.1	4.6	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.4	5.2	0.0	11.0	0.1	6.9	0.8	3.1	10.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	0.0	38.5	45.6	0.0	65.7	16.4	16.2	12.1	61.0	11.7	6.3
LnGrp LOS	D	A	D	D	A	E	B	B	B	E	B	A
Approach Vol, veh/h		55			495			517			980	
Approach Delay, s/veh		48.6			58.2			15.7			20.9	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.8	76.2		32.6		91.0		32.6				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	14.0	65.0		33.0		85.0		33.0				
Max Q Clear Time (g_c+I1), s	8.5	18.5		21.2		26.7		25.2				
Green Ext Time (p_c), s	0.3	3.0		0.1		7.2		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			29.3									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	48	27	0	4	18	602	10	2	522	23
Future Vol, veh/h	61	0	48	27	0	4	18	602	10	2	522	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	0	53	30	0	4	20	669	11	2	580	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1301	1304	580	1333	1319	669	606	0	0	680	0	0
Stage 1	584	584	-	709	709	-	-	-	-	-	-	-
Stage 2	717	720	-	624	610	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	139	162	518	132	158	461	982	-	-	922	-	-
Stage 1	501	501	-	428	440	-	-	-	-	-	-	-
Stage 2	424	435	-	477	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	135	158	518	116	154	461	982	-	-	922	-	-
Mov Cap-2 Maneuver	135	158	-	116	154	-	-	-	-	-	-	-
Stage 1	491	499	-	419	431	-	-	-	-	-	-	-
Stage 2	411	426	-	427	487	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	36.9	42.2	0.2	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	982	-	-	135	518	116	461	922	-	-
HCM Lane V/C Ratio	0.02	-	-	0.502	0.103	0.259	0.01	0.002	-	-
HCM Control Delay (s)	8.7	-	-	55.9	12.7	46.5	12.9	8.9	0	-
HCM Lane LOS	A	-	-	F	B	E	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.4	0.3	1	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1129	816	291	631	491	436
Future Volume (vph)	1129	816	291	631	491	436
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	71.8	71.8	20.7	98.6	37.0	37.0
Actuated g/C Ratio	0.48	0.48	0.14	0.66	0.25	0.25
v/c Ratio	0.88	0.87	0.77	0.34	0.77	0.52
Control Delay	44.9	16.0	75.3	12.7	60.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	16.0	75.3	12.7	60.1	5.3
LOS	D	B	E	B	E	A
Approach Delay	32.8			32.4	34.3	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 33.1	Intersection LOS: C
Intersection Capacity Utilization 70.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1227	887	316	686	534	474
v/c Ratio	0.88	0.87	0.77	0.34	0.77	0.52
Control Delay	44.9	16.0	75.3	12.7	60.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	16.0	75.3	12.7	60.1	5.3
Queue Length 50th (ft)	566	93	155	147	252	0
Queue Length 95th (ft)	#837	#583	205	217	295	44
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1392	1022	454	2010	898	1051
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.87	0.70	0.34	0.59	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1129	816	291	631	491	436
Future Volume (veh/h)	1129	816	291	631	491	436
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1227	887	316	686	534	474
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1455	649	361	2037	700	565
Arrive On Green	0.50	0.50	0.12	0.66	0.25	0.25
Sat Flow, veh/h	3011	1309	3018	3185	2826	2281
Grp Volume(v), veh/h	1227	887	316	686	534	474
Grp Sat Flow(s),veh/h/ln	1467	1309	1509	1552	1413	1141
Q Serve(g_s), s	54.3	74.4	15.4	14.6	26.3	29.6
Cycle Q Clear(g_c), s	54.3	74.4	15.4	14.6	26.3	29.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1455	649	361	2037	700	565
V/C Ratio(X)	0.84	1.37	0.88	0.34	0.76	0.84
Avail Cap(c_a), veh/h	1455	649	449	2037	906	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	37.8	64.9	11.4	52.3	53.6
Incr Delay (d2), s/veh	6.1	174.6	14.9	0.4	3.5	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.1	53.4	6.6	4.9	9.3	17.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.9	212.4	79.8	11.8	55.8	61.3
LnGrp LOS	D	F	E	B	E	E
Approach Vol, veh/h	2114			1002	1008	
Approach Delay, s/veh	111.7			33.3	58.4	
Approach LOS	F			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		105.7		44.3	24.0	81.7
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		16.6		31.6	17.4	76.4
Green Ext Time (p_c), s		10.9		5.6	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1740	311	326	1060	336	462
Future Volume (vph)	1740	311	326	1060	336	462
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.9	83.9	107.0	106.9	30.1	30.1
Actuated g/C Ratio	0.56	0.56	0.71	0.71	0.20	0.20
v/c Ratio	1.10	0.32	1.37	0.53	0.99	0.58
Control Delay	80.6	3.4	225.1	11.1	103.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.6	3.4	225.1	11.1	103.2	18.0
LOS	F	A	F	B	F	B
Approach Delay	68.9			61.5	53.9	
Approach LOS	E			E	D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 63.6	Intersection LOS: E
Intersection Capacity Utilization 100.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1813	324	340	1104	350	481
v/c Ratio	1.10	0.32	1.37	0.53	0.99	0.58
Control Delay	80.6	3.4	225.1	11.1	103.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.6	3.4	225.1	11.1	103.2	18.0
Queue Length 50th (ft)	~1059	11	~388	241	345	65
Queue Length 95th (ft)	#1192	m52	#593	291	#555	132
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1641	1028	249	2074	355	832
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.32	1.37	0.53	0.99	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1740	311	326	1060	336	462
Future Volume (veh/h)	1740	311	326	1060	336	462
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1812	324	340	1104	350	481
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1657	887	355	2091	357	560
Arrive On Green	1.00	1.00	0.11	0.71	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	2790
Grp Volume(v), veh/h	1812	324	340	1104	350	481
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1395
Q Serve(g_s), s	0.0	0.0	15.4	26.0	29.3	25.0
Cycle Q Clear(g_c), s	0.0	0.0	15.4	26.0	29.3	25.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1657	887	355	2091	357	560
V/C Ratio(X)	1.09	0.37	0.96	0.53	0.98	0.86
Avail Cap(c_a), veh/h	1657	887	355	2091	357	560
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	28.1	9.9	59.6	57.9
Incr Delay (d2), s/veh	47.6	0.6	36.2	1.0	42.0	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.1	9.2	7.7	17.3	19.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.6	0.6	64.3	10.9	101.6	71.0
LnGrp LOS	F	A	E	B	F	E
Approach Vol, veh/h	2136			1444	831	
Approach Delay, s/veh	40.5			23.5	83.9	
Approach LOS	D			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	23.0	90.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		28.0		31.3	17.4	2.0
Green Ext Time (p_c), s		31.6		0.0	0.0	64.1

Intersection Summary	
HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	342	1642	16	1099	302	27	37	351	5	226
Future Volume (vph)	342	1642	16	1099	302	27	37	351	5	226
Turn Type	Prot	NA	Perm	NA	Perm	Perm	NA	Prot	NA	Perm
Protected Phases	1	6		2			8	7	4	
Permitted Phases			2		2	8				4
Detector Phase	1	6	2	2	2	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	11.0	14.7	14.7
Total Split (s)	34.0	107.0	73.0	73.0	73.0	20.0	20.0	23.0	43.0	43.0
Total Split (%)	22.7%	71.3%	48.7%	48.7%	48.7%	13.3%	13.3%	15.3%	28.7%	28.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.0	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1		6.7	6.0	6.7	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	22.8	99.2	70.3	70.3	70.3		12.9	18.1	37.0	37.0
Actuated g/C Ratio	0.15	0.66	0.47	0.47	0.47		0.09	0.12	0.25	0.25
v/c Ratio	0.78	0.88	0.18	0.83	0.42		0.86	0.88	0.01	0.41
Control Delay	74.6	8.0	28.8	32.3	5.9		94.3	87.1	43.4	7.5
Queue Delay	0.0	2.1	0.0	0.3	0.0		0.4	0.8	0.0	0.0
Total Delay	74.6	10.1	28.8	32.7	5.9		94.7	87.9	43.4	7.5
LOS	E	B	C	C	A		F	F	D	A
Approach Delay		21.2		26.9			94.7		56.3	
Approach LOS		C		C			F		E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 30.5	Intersection LOS: C
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd



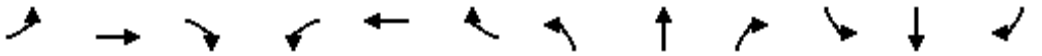


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	356	1724	17	1145	315	142	366	5	235
v/c Ratio	0.78	0.88	0.18	0.83	0.42	0.86	0.88	0.01	0.41
Control Delay	74.6	8.0	28.8	32.3	5.9	94.3	87.1	43.4	7.5
Queue Delay	0.0	2.1	0.0	0.3	0.0	0.4	0.8	0.0	0.0
Total Delay	74.6	10.1	28.8	32.7	5.9	94.7	87.9	43.4	7.5
Queue Length 50th (ft)	167	188	6	368	0	111	186	4	0
Queue Length 95th (ft)	m149	m160	m21	492	109	#236	#286	16	71
Internal Link Dist (ft)		3939		643		194		367	
Turn Bay Length (ft)	150		100						
Base Capacity (vph)	558	1975	93	1376	746	170	415	463	570
Starvation Cap Reductn	0	0	0	32	0	0	0	0	0
Spillback Cap Reductn	0	138	0	0	0	1	5	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.94	0.18	0.85	0.42	0.84	0.89	0.01	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1642	13	16	1099	302	27	37	72	351	5	226
Future Volume (veh/h)	342	1642	13	16	1099	302	27	37	72	351	5	226
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	1710	14	17	1145	315	28	39	75	366	5	235
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	407	2025	17	114	1458	650	49	45	74	392	453	384
Arrive On Green	0.13	0.67	0.67	0.98	0.98	0.98	0.09	0.09	0.09	0.11	0.24	0.24
Sat Flow, veh/h	3045	3040	25	282	2962	1321	230	512	831	3456	1870	1585
Grp Volume(v), veh/h	356	840	884	17	1145	315	142	0	0	366	5	235
Grp Sat Flow(s),veh/h/ln	1522	1495	1569	282	1481	1321	1573	0	0	1728	1870	1585
Q Serve(g_s), s	17.2	64.3	64.5	5.4	4.0	1.1	10.1	0.0	0.0	15.8	0.3	19.8
Cycle Q Clear(g_c), s	17.2	64.3	64.5	43.9	4.0	1.1	13.3	0.0	0.0	15.8	0.3	19.8
Prop In Lane	1.00		0.02	1.00		1.00	0.20		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	407	996	1045	114	1458	650	168	0	0	392	453	384
V/C Ratio(X)	0.87	0.84	0.85	0.15	0.79	0.48	0.84	0.00	0.00	0.93	0.01	0.61
Avail Cap(c_a), veh/h	568	996	1045	114	1458	650	168	0	0	392	453	384
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.83	0.83	0.83	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	19.1	19.1	12.5	0.6	0.6	68.3	0.0	0.0	65.9	43.2	50.6
Incr Delay (d2), s/veh	1.1	0.9	0.8	2.3	3.6	2.1	30.5	0.0	0.0	29.4	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	21.0	22.1	0.4	1.1	0.6	6.9	0.0	0.0	8.5	0.1	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.8	20.0	20.0	14.8	4.2	2.7	98.8	0.0	0.0	95.4	43.2	53.5
LnGrp LOS	E	B	B	B	A	A	F	A	A	F	D	D
Approach Vol, veh/h		2080			1477			142			606	
Approach Delay, s/veh		27.7			4.0			98.8			78.7	
Approach LOS		C			A			F			E	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	26.1	80.9		43.0		107.0	23.0	20.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1	6.0	6.7				
Max Green Setting (Gmax), s	28.0	65.9		36.3		99.9	17.0	13.3				
Max Q Clear Time (g_c+I1), s	19.2	45.9		21.8		66.5	17.8	15.3				
Green Ext Time (p_c), s	0.9	15.1		0.7		27.4	0.0	0.0				

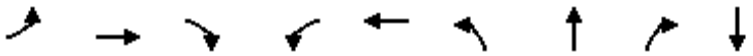
Intersection Summary												
HCM 6th Ctrl Delay			29.1									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	27	1890	401	306	1188	236	55	308	13	54
Future Volume (vph)	27	1890	401	306	1188	236	55	308	13	54
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6	2		8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.5	94.3	94.3	114.0	106.2	22.6	22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.63	0.76	0.71	0.15	0.15	0.15		0.15
v/c Ratio	0.09	1.06	0.45	1.52	0.59	1.34	0.20	0.95		0.37
Control Delay	5.5	68.0	5.4	288.9	6.4	231.6	57.9	77.5		54.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	5.5	68.0	5.4	288.9	6.4	231.6	57.9	77.5		54.5
LOS	A	E	A	F	A	F	E	E		D
Approach Delay		56.4			63.5		136.5			54.5
Approach LOS		E			E		F			D

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay: 69.4	Intersection LOS: E
Intersection Capacity Utilization 105.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





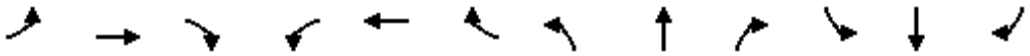
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	28	1929	409	312	1230	241	56	314	98
v/c Ratio	0.09	1.06	0.45	1.52	0.59	1.34	0.20	0.95	0.37
Control Delay	5.5	68.0	5.4	288.9	6.4	231.6	57.9	77.5	54.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	68.0	5.4	288.9	6.4	231.6	57.9	77.5	54.5
Queue Length 50th (ft)	6	~1090	47	~381	90	~305	49	208	76
Queue Length 95th (ft)	14	#1224	112	m#528	190	#484	93	#400	137
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	318	1815	918	205	2090	180	280	332	267
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	1.06	0.45	1.52	0.59	1.34	0.20	0.95	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1890	401	306	1188	18	236	55	308	13	54	29
Future Volume (veh/h)	27	1890	401	306	1188	18	236	55	308	13	54	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1929	409	312	1212	18	241	56	314	13	55	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	316	1827	815	204	2083	31	229	282	239	44	159	78
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2906	1296	1795	3016	45	1313	1870	1585	114	1052	515
Grp Volume(v), veh/h	28	1929	409	312	601	629	241	56	314	98	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1296	1795	1495	1566	1313	1870	1585	1681	0	0
Q Serve(g_s), s	0.8	94.3	25.7	13.0	31.2	31.2	15.1	3.9	22.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	94.3	25.7	13.0	31.2	31.2	22.6	3.9	22.6	7.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	0.13		0.31
Lane Grp Cap(c), veh/h	316	1827	815	204	1032	1081	229	282	239	280	0	0
V/C Ratio(X)	0.09	1.06	0.50	1.53	0.58	0.58	1.05	0.20	1.31	0.35	0.00	0.00
Avail Cap(c_a), veh/h	343	1827	815	204	1032	1081	229	282	239	280	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.56	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.7	27.9	15.1	57.4	12.0	12.0	66.6	55.8	63.7	57.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	37.6	2.2	253.1	1.3	1.3	74.2	0.7	168.2	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	38.8	7.6	21.8	10.2	10.7	13.5	1.9	20.2	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	65.4	17.3	310.4	13.4	13.3	140.8	56.5	231.9	58.9	0.0	0.0
LnGrp LOS	B	F	B	F	B	B	F	E	F	E	A	A
Approach Vol, veh/h		2366			1542			611			98	
Approach Delay, s/veh		56.5			73.4			179.9			58.9	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	110.3		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.8	33.2		9.5	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	27.2		0.6	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			78.5									
HCM 6th LOS			E									

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	4	228	25	5	35	214	1175	37	38	2026	112
Future Vol, veh/h	55	4	228	25	5	35	214	1175	37	38	2026	112
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	57	4	238	26	5	36	223	1224	39	40	2110	117

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3251	3899	1055	2807	3977	612	2227	0	0	1263	0	0
Stage 1	2190	2190	-	1670	1670	-	-	-	-	-	-	-
Stage 2	1061	1709	-	1137	2307	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 4	~ 3	~ 222	~ 8	~ 3	436	230	-	-	546	-	-
Stage 1	~ 46	82	-	100	151	-	-	-	-	-	-	-
Stage 2	239	145	-	215	72	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	0	~ 222	-	0	436	230	-	-	546	-	-
Mov Cap-2 Maneuver	0	0	-	-	0	-	-	-	-	-	-	-
Stage 1	~ 1	76	-	~ 3	~ 5	-	-	-	-	-	-	-
Stage 2	-	~ 4	-	-	67	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			14.5	0.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	230	-	-	-	222	-	436	546	-	-
HCM Lane V/C Ratio	0.969	-	-	-	1.07	-	0.084	0.072	-	-
HCM Control Delay (s)	96.6	-	-	-	126.7	-	14	12.1	-	-
HCM Lane LOS	F	-	-	-	F	-	B	B	-	-
HCM 95th %tile Q(veh)	8.7	-	-	-	10.5	-	0.3	0.2	-	-

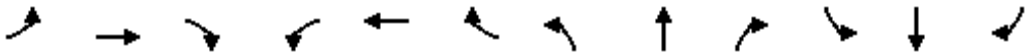
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	352	173	1336	125	172	126	775	451	71	70	739	176
Future Volume (vph)	352	173	1336	125	172	126	775	451	71	70	739	176
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	33.0	54.0		15.0	36.0	36.0	55.2	89.2	89.2	21.8	55.8	55.8
Total Split (%)	18.3%	30.0%		8.3%	20.0%	20.0%	30.7%	49.6%	49.6%	12.1%	31.0%	31.0%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	63.0	48.0	103.2	37.0	29.0	29.0	48.4	83.6	83.6	13.6	48.9	48.9
Actuated g/C Ratio	0.35	0.27	0.57	0.21	0.16	0.16	0.27	0.46	0.46	0.08	0.27	0.27
v/c Ratio	0.92	0.36	1.00	0.48	0.60	0.32	1.00	0.35	0.09	0.54	0.97	0.37
Control Delay	49.9	40.7	67.2	54.8	79.2	3.2	96.8	32.0	0.2	95.3	88.4	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	40.7	67.2	54.8	79.2	3.2	96.8	32.0	0.2	95.3	88.4	7.9
LOS	D	D	E	D	E	A	F	C	A	F	F	A
Approach Delay		61.4			49.4			69.0			74.5	
Approach LOS		E			D			E			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 65.3	Intersection LOS: E
Intersection Capacity Utilization 93.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





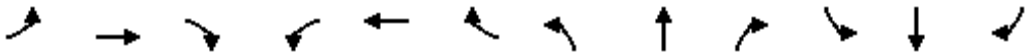
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	367	180	1392	130	179	131	807	470	74	73	770	183
v/c Ratio	0.92	0.36	1.00	0.48	0.60	0.32	1.00	0.35	0.09	0.54	0.97	0.37
Control Delay	49.9	40.7	67.2	54.8	79.2	3.2	96.8	32.0	0.2	95.3	88.4	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	40.7	67.2	54.8	79.2	3.2	96.8	32.0	0.2	95.3	88.4	7.9
Queue Length 50th (ft)	328	162	~948	109	199	0	~498	187	0	84	477	0
Queue Length 95th (ft)	m361	m176	m#1104	169	289	9	#644	235	0	145	#615	65
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	401	496	1392	272	300	410	804	1340	812	146	797	492
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.36	1.00	0.48	0.60	0.32	1.00	0.35	0.09	0.50	0.97	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	173	1336	125	172	126	775	451	71	70	739	176
Future Volume (veh/h)	352	173	1336	125	172	126	775	451	71	70	739	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	367	180	1392	130	179	131	807	470	74	73	770	183
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	391	499	1316	174	312	264	819	1536	838	91	922	411
Arrive On Green	0.05	0.09	0.09	0.04	0.17	0.17	0.27	0.53	0.53	0.05	0.31	0.31
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	367	180	1392	130	179	131	807	470	74	73	770	183
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	27.0	16.3	48.0	8.0	15.9	13.5	47.5	16.4	4.2	7.3	43.5	19.9
Cycle Q Clear(g_c), s	27.0	16.3	48.0	8.0	15.9	13.5	47.5	16.4	4.2	7.3	43.5	19.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	499	1316	174	312	264	819	1536	838	91	922	411
V/C Ratio(X)	0.94	0.36	1.06	0.75	0.57	0.50	0.99	0.31	0.09	0.80	0.84	0.44
Avail Cap(c_a), veh/h	391	499	1316	174	312	264	819	1536	838	147	922	411
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.26	0.26	0.26	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	67.6	46.1	63.1	69.1	68.1	65.5	23.9	21.0	84.5	57.7	49.6
Incr Delay (d2), s/veh	11.6	0.1	31.2	16.9	2.8	1.7	27.8	0.5	0.2	34.5	8.8	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	8.3	29.9	2.7	8.0	5.6	21.3	5.7	1.6	4.2	17.2	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.1	67.8	77.3	80.0	72.0	69.9	93.3	24.4	21.2	119.0	66.5	53.0
LnGrp LOS	E	E	F	E	E	E	F	C	C	F	E	D
Approach Vol, veh/h		1939			440			1351			1026	
Approach Delay, s/veh		75.5			73.7			65.4			67.8	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	102.0	33.0	37.0	55.2	62.9	15.0	55.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	14.9	82.3	27.0	29.0	48.4	48.9	8.0	* 48
Max Q Clear Time (g_c+I1), s	9.3	18.4	29.0	17.9	49.5	45.5	10.0	50.0
Green Ext Time (p_c), s	0.1	7.4	0.0	1.3	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.8
HCM 6th LOS	E

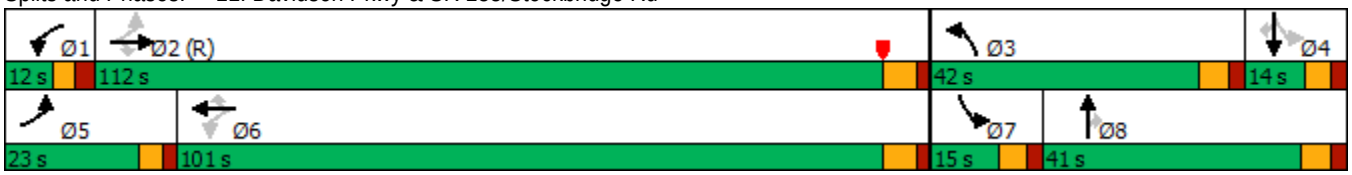
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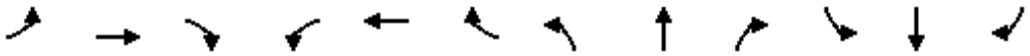
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	1885	979	57	1215	61	1098	28	93	70	27	188
Future Volume (vph)	165	1885	979	57	1215	61	1098	28	93	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.3	11.0	14.0	14.0
Total Split (s)	23.0	112.0	112.0	12.0	101.0	101.0	42.0	41.0	41.0	15.0	14.0	14.0
Total Split (%)	12.8%	62.2%	62.2%	6.7%	56.1%	56.1%	23.3%	22.8%	22.8%	8.3%	7.8%	7.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.8	4.0	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	118.4	105.9	105.9	108.1	100.8	100.8	35.5	34.7	34.7	17.0	8.3	8.3
Actuated g/C Ratio	0.66	0.59	0.59	0.60	0.56	0.56	0.20	0.19	0.19	0.09	0.05	0.05
v/c Ratio	0.59	0.64	0.85	0.44	0.44	0.07	0.90	0.08	0.24	0.49	0.33	0.89
Control Delay	17.6	30.2	20.5	25.9	18.6	0.8	80.7	60.4	5.5	64.3	94.1	56.0
Queue Delay	0.0	14.8	28.0	0.0	0.2	0.0	49.4	0.0	0.1	0.0	0.0	44.2
Total Delay	17.6	45.0	48.5	25.9	18.8	0.8	130.1	60.4	5.5	64.3	94.1	100.2
LOS	B	D	D	C	B	A	F	E	A	E	F	F
Approach Delay		44.6			18.3			119.0			90.8	
Approach LOS		D			B			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 56.4	Intersection LOS: E
Intersection Capacity Utilization 87.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd



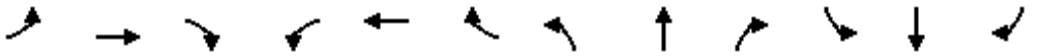


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	172	1964	1020	59	1266	64	1144	29	97	73	28	196
v/c Ratio	0.59	0.64	0.85	0.44	0.44	0.07	0.90	0.08	0.24	0.49	0.33	0.89
Control Delay	17.6	30.2	20.5	25.9	18.6	0.8	80.7	60.4	5.5	64.3	94.1	56.0
Queue Delay	0.0	14.8	28.0	0.0	0.2	0.0	49.4	0.0	0.1	0.0	0.0	44.2
Total Delay	17.6	45.0	48.5	25.9	18.8	0.8	130.1	60.4	5.5	64.3	94.1	100.2
Queue Length 50th (ft)	84	533	705	12	351	0	366	29	0	66	33	47
Queue Length 95th (ft)	m102	574	895	39	339	10	410	62	32	113	72	#205
Internal Link Dist (ft)		432			495			439			264	
Turn Bay Length (ft)	75		165	125								
Base Capacity (vph)	342	3065	1204	135	2905	955	1293	362	404	152	85	221
Starvation Cap Reductn	0	1130	231	0	741	0	0	0	0	0	0	0
Spillback Cap Reductn	0	844	0	0	0	0	608	0	20	0	0	39
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	1.01	1.05	0.44	0.59	0.07	1.67	0.08	0.25	0.48	0.33	1.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1885	979	57	1215	61	1098	28	93	70	27	188
Future Volume (veh/h)	165	1885	979	57	1215	61	1098	28	93	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	1964	0	59	1266	64	1144	29	97	73	28	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	286	3172		165	3090	940	1247	331	280	170	63	
Arrive On Green	0.03	0.41	0.00	0.01	0.20	0.20	0.19	0.18	0.18	0.05	0.03	0.00
Sat Flow, veh/h	1781	5210	1585	1781	5210	1585	6484	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	172	1964	0	59	1266	64	1144	29	97	73	28	0
Grp Sat Flow(s),veh/h/ln	1781	1303	1585	1781	1303	1585	1621	1870	1585	1781	1870	1585
Q Serve(g_s), s	6.7	53.7	0.0	2.3	38.2	5.9	31.1	2.3	9.7	7.1	2.6	0.0
Cycle Q Clear(g_c), s	6.7	53.7	0.0	2.3	38.2	5.9	31.1	2.3	9.7	7.1	2.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	3172		165	3090	940	1247	331	280	170	63	
V/C Ratio(X)	0.60	0.62		0.36	0.41	0.07	0.92	0.09	0.35	0.43	0.45	
Avail Cap(c_a), veh/h	375	3172		173	3090	940	1297	361	306	171	83	
HCM Platoon Ratio	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	36.8	0.0	23.5	44.8	31.8	71.3	62.0	65.0	79.0	85.4	0.0
Incr Delay (d2), s/veh	0.8	0.4	0.0	1.1	0.2	0.1	10.3	0.1	0.7	1.7	4.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	18.0	0.0	1.0	13.5	2.4	14.0	1.1	4.0	3.4	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	37.1	0.0	24.5	45.0	31.9	81.6	62.1	65.7	80.7	90.3	0.0
LnGrp LOS	C	D		C	D	C	F	E	E	F	F	
Approach Vol, veh/h		2136	A		1389			1270			101	A
Approach Delay, s/veh		35.8			43.5			79.9			83.4	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	115.9	40.6	12.3	14.0	113.0	14.8	38.1
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3	6.0	* 6.3
Max Green Setting (Gmax), s	6.5	* 1.1E2	36.0	* 8	18.0	* 95	9.0	* 35
Max Q Clear Time (g_c+I1), s	4.3	55.7	33.1	4.6	8.7	40.2	9.1	11.7
Green Ext Time (p_c), s	0.0	39.5	1.5	0.0	0.3	25.5	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

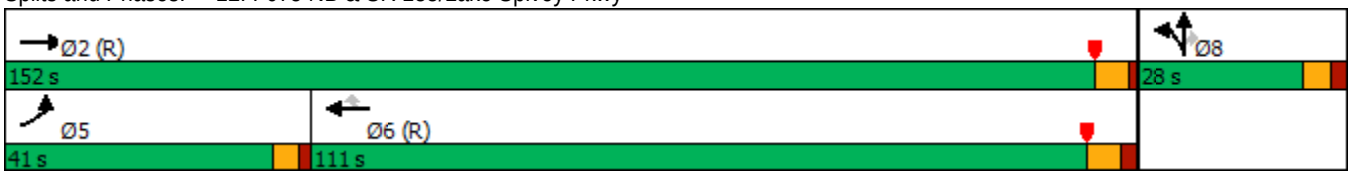
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	436	2740	2059	493	0	306
Future Volume (vph)	436	2740	2059	493	0	306
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	29.0	147.4	112.4	112.4	20.5	20.5
Actuated g/C Ratio	0.16	0.82	0.62	0.62	0.11	0.11
v/c Ratio	0.82	0.85	1.20	0.48	0.30	0.87
Control Delay	88.2	5.9	121.1	3.8	76.8	87.9
Queue Delay	0.0	2.1	0.8	2.2	0.0	0.4
Total Delay	88.2	8.0	121.9	6.0	76.8	88.2
LOS	F	A	F	A	E	F
Approach Delay		19.0	99.5		86.4	
Approach LOS		B	F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 56.8	Intersection LOS: E
Intersection Capacity Utilization 97.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





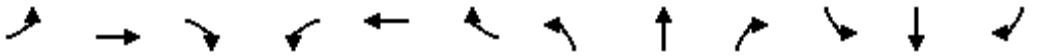
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	454	2854	2145	514	61	319
v/c Ratio	0.82	0.85	1.20	0.48	0.30	0.87
Control Delay	88.2	5.9	121.1	3.8	76.8	87.9
Queue Delay	0.0	2.1	0.8	2.2	0.0	0.4
Total Delay	88.2	8.0	121.9	6.0	76.8	88.2
Queue Length 50th (ft)	292	292	~1600	0	67	177
Queue Length 95th (ft)	m291	m300	#1793	m93	119	#259
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	686	3370	1788	1077	215	387
Starvation Cap Reductn	0	218	399	408	0	0
Spillback Cap Reductn	0	363	0	0	0	4
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.95	1.54	0.77	0.28	0.83

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	2740	0	0	2059	493	59	0	306	0	0	0
Future Volume (veh/h)	436	2740	0	0	2059	493	59	0	306	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	454	2854	0	0	2145	514	61	0	319			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	500	3331	0	0	1822	1004	217	0	339			
Arrive On Green	0.29	1.00	0.00	0.00	0.63	0.63	0.12	0.00	0.12			
Sat Flow, veh/h	3456	4271	0	0	2954	1585	1781	0	2790			
Grp Volume(v), veh/h	454	2854	0	0	2145	514	61	0	319			
Grp Sat Flow(s),veh/h/ln	1728	1378	0	0	1439	1585	1781	0	1395			
Q Serve(g_s), s	22.8	0.0	0.0	0.0	114.0	31.7	5.6	0.0	20.4			
Cycle Q Clear(g_c), s	22.8	0.0	0.0	0.0	114.0	31.7	5.6	0.0	20.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	500	3331	0	0	1822	1004	217	0	339			
V/C Ratio(X)	0.91	0.86	0.00	0.00	1.18	0.51	0.28	0.00	0.94			
Avail Cap(c_a), veh/h	691	3354	0	0	1822	1004	217	0	339			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.16	0.16	0.00	0.00	0.68	0.68	1.00	0.00	1.00			
Uniform Delay (d), s/veh	62.8	0.0	0.0	0.0	33.0	17.9	71.9	0.0	78.4			
Incr Delay (d2), s/veh	2.5	0.5	0.0	0.0	84.0	1.3	0.7	0.0	33.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.9	0.2	0.0	0.0	58.0	11.6	2.6	0.0	8.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	0.5	0.0	0.0	117.0	19.2	72.6	0.0	111.9			
LnGrp LOS	E	A	A	A	F	B	E	A	F			
Approach Vol, veh/h		3308			2659			380				
Approach Delay, s/veh		9.4			98.1			105.6				
Approach LOS		A			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		152.0			31.0	121.0		28.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			24.8	116.0		22.4				
Green Ext Time (p_c), s		132.4			1.2	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	52.3
HCM 6th LOS	D

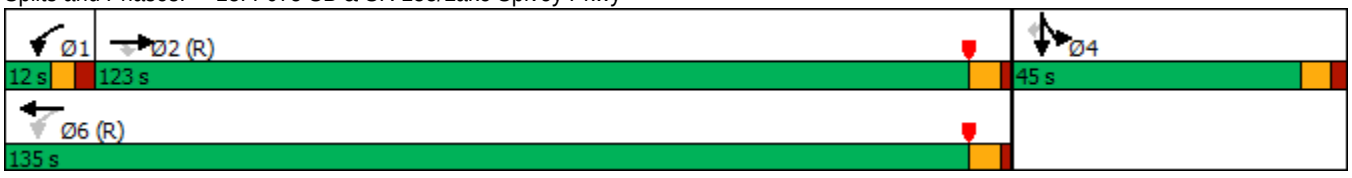
Notes

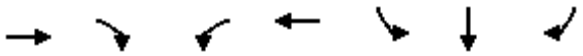
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2512	71	271	1845	687	0	706
Future Volume (vph)	2512	71	271	1845	687	0	706
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	0.97	0.09	2.76	0.93	0.99	0.99	1.22
Control Delay	25.8	6.4	817.1	19.2	112.7	112.7	170.4
Queue Delay	28.5	0.0	0.0	45.2	0.0	0.0	0.0
Total Delay	54.3	6.4	817.1	64.4	112.7	112.7	170.4
LOS	D	A	F	E	F	F	F
Approach Delay	53.0			160.7		141.9	
Approach LOS	D			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.76	
Intersection Signal Delay: 110.7	Intersection LOS: F
Intersection Capacity Utilization 97.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





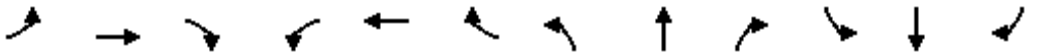
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2590	73	279	1902	354	354	728
v/c Ratio	0.97	0.09	2.76	0.93	0.99	0.99	1.22
Control Delay	25.8	6.4	817.1	19.2	112.7	112.7	170.4
Queue Delay	28.5	0.0	0.0	45.2	0.0	0.0	0.0
Total Delay	54.3	6.4	817.1	64.4	112.7	112.7	170.4
Queue Length 50th (ft)	570	8	~518	324	444	444	~597
Queue Length 95th (ft)	m456	m12	m#411	m247	#677	#677	#743
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2678	853	101	2054	359	359	596
Starvation Cap Reductn	249	0	0	121	0	0	0
Spillback Cap Reductn	0	0	0	348	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.09	2.76	1.11	0.99	0.99	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰	↑↑					↰	↲	↱↱
Traffic Volume (veh/h)	0	2512	71	271	1845	0	0	0	0	687	0	706
Future Volume (veh/h)	0	2512	71	271	1845	0	0	0	0	687	0	706
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2590	73	279	1902	0				708	0	728
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	2690	835	173	2064	0				762	0	678
Arrive On Green	0.00	1.00	1.00	0.07	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1284	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	2590	73	279	1902	0				708	0	728
Grp Sat Flow(s),veh/h/ln	0	1378	1284	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	0.0				35.1	0.0	38.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	0.0				35.1	0.0	38.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2690	835	173	2064	0				762	0	678
V/C Ratio(X)	0.00	0.96	0.09	1.61	0.92	0.00				0.93	0.00	1.07
Avail Cap(c_a), veh/h	0	2690	835	173	2064	0				762	0	678
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	23.9	0.0	0.0				69.4	0.0	70.8
Incr Delay (d2), s/veh	0.0	1.4	0.0	278.6	0.9	0.0				17.8	0.0	56.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	17.6	0.3	0.0				17.7	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.4	0.0	302.5	0.9	0.0				87.2	0.0	126.8
LnGrp LOS	A	A	A	F	A	A				F	A	F
Approach Vol, veh/h		2663			2181						1436	
Approach Delay, s/veh		1.4			39.5						107.3	
Approach LOS		A			D						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	8.1	2.0		40.5		2.0
Green Ext Time (p_c), s	0.0	102.0		0.0		78.8

Intersection Summary		
HCM 6th Ctrl Delay		38.8
HCM 6th LOS		D

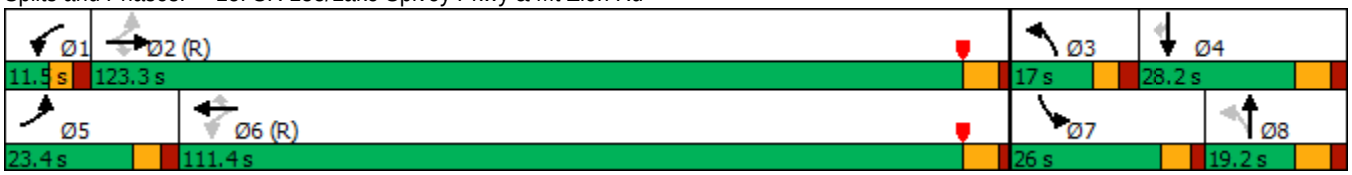
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	212	1814	168	47	1798	382	148	87	391	79	211
Future Volume (vph)	212	1814	168	47	1798	382	148	87	391	79	211
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8				4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	5.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	11.0	15.1	15.1
Total Split (s)	23.4	123.3	123.3	11.5	111.4	111.4	17.0	19.2	26.0	28.2	28.2
Total Split (%)	13.0%	68.5%	68.5%	6.4%	61.9%	61.9%	9.4%	10.7%	14.4%	15.7%	15.7%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	4.0	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	128.5	119.2	119.2	111.9	105.0	105.0	24.2	12.1	20.0	21.1	21.1
Actuated g/C Ratio	0.71	0.66	0.66	0.62	0.58	0.58	0.13	0.07	0.11	0.12	0.12
v/c Ratio	1.08	0.91	0.16	0.45	1.03	0.40	0.77	1.06	1.09	0.39	0.75
Control Delay	122.9	22.0	4.1	20.8	52.9	10.8	88.6	166.1	143.6	79.2	48.8
Queue Delay	0.0	15.7	0.0	0.0	14.0	0.0	0.0	0.0	5.5	0.0	0.3
Total Delay	122.9	37.7	4.1	20.8	66.9	10.8	88.6	166.1	149.1	79.2	49.0
LOS	F	D	A	C	E	B	F	F	F	E	D
Approach Delay		43.4			56.3			124.6		110.0	
Approach LOS		D			E			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 61.3	Intersection LOS: E
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





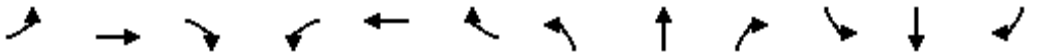
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	226	1930	179	50	1913	406	157	136	416	84	224
v/c Ratio	1.08	0.91	0.16	0.45	1.03	0.40	0.77	1.06	1.09	0.39	0.75
Control Delay	122.9	22.0	4.1	20.8	52.9	10.8	88.6	166.1	143.6	79.2	48.8
Queue Delay	0.0	15.7	0.0	0.0	14.0	0.0	0.0	0.0	5.5	0.0	0.3
Total Delay	122.9	37.7	4.1	20.8	66.9	10.8	88.6	166.1	149.1	79.2	49.0
Queue Length 50th (ft)	~247	743	10	18	~1254	94	161	~164	~284	93	113
Queue Length 95th (ft)	m#313	986	m37	m24	#1382	m146	#267	#322	#401	156	#224
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	209	2115	1092	110	1863	1012	204	128	381	218	298
Starvation Cap Reductn	0	139	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	231	0	0	65	0	0	0	76	0	3
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	1.02	0.16	0.45	1.06	0.40	0.77	1.06	1.36	0.39	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1814	168	47	1798	382	148	87	40	391	79	211
Future Volume (veh/h)	212	1814	168	47	1798	382	148	87	40	391	79	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	1930	179	50	1913	406	157	93	43	416	84	224
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	247	2116	1034	113	2000	977	221	81	38	384	219	186
Arrive On Green	0.04	0.44	0.44	0.06	1.00	1.00	0.06	0.07	0.07	0.11	0.12	0.12
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	3456	1870	1585
Grp Volume(v), veh/h	226	1930	179	50	1913	406	157	0	136	416	84	224
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1728	1870	1585
Q Serve(g_s), s	8.8	100.3	12.4	1.8	0.0	0.0	11.0	0.0	12.1	20.0	7.5	21.1
Cycle Q Clear(g_c), s	8.8	100.3	12.4	1.8	0.0	0.0	11.0	0.0	12.1	20.0	7.5	21.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	247	2116	1034	113	2000	977	221	0	119	384	219	186
V/C Ratio(X)	0.92	0.91	0.17	0.44	0.96	0.42	0.71	0.00	1.14	1.08	0.38	1.21
Avail Cap(c_a), veh/h	306	2116	1034	118	2000	977	221	0	119	384	219	186
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	0.34	0.34	0.34	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	45.9	21.1	41.1	0.0	0.0	75.4	0.0	84.0	80.0	73.4	79.5
Incr Delay (d2), s/veh	10.8	2.5	0.1	0.9	5.3	0.4	10.2	0.0	126.2	70.1	2.3	132.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	42.1	5.1	1.3	1.5	0.1	2.3	0.0	9.8	12.6	3.7	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	48.3	21.2	42.1	5.3	0.4	85.5	0.0	210.1	150.1	75.8	211.7
LnGrp LOS	D	D	C	D	A	A	F	A	F	F	E	F
Approach Vol, veh/h		2335			2369			293			724	
Approach Delay, s/veh		45.0			5.2			143.4			160.6	
Approach LOS		D			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	123.8	17.0	28.2	17.4	117.4	26.0	19.2
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.0	* 1.2E2	11.0	21.1	* 17	* 1.1E2	20.0	12.1
Max Q Clear Time (g_c+I1), s	3.8	102.3	13.0	23.1	10.8	2.0	22.0	14.1
Green Ext Time (p_c), s	0.0	13.8	0.0	0.0	0.3	79.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

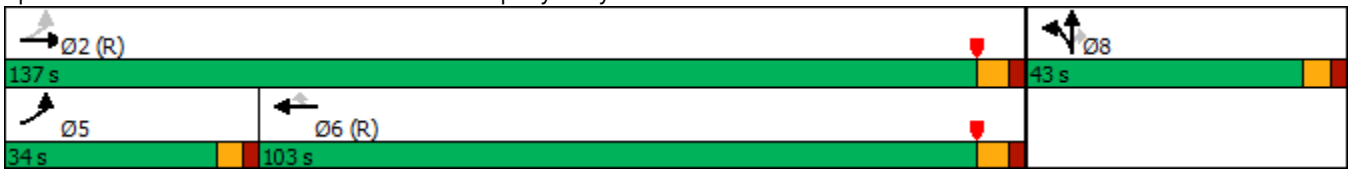
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	284	2202	1448	820	233	0	169
Future Volume (vph)	284	2202	1448	820	233	0	169
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	148.8	147.4	110.3	110.3	19.6	19.6	19.6
Actuated g/C Ratio	0.83	0.82	0.61	0.61	0.11	0.11	0.11
v/c Ratio	0.76	0.91	0.80	0.76	0.69	0.70	0.83
Control Delay	39.4	27.1	17.8	7.4	95.3	95.8	81.3
Queue Delay	0.0	45.5	7.7	3.2	0.2	0.2	0.0
Total Delay	39.4	72.6	25.5	10.6	95.6	96.1	81.3
LOS	D	E	C	B	F	F	F
Approach Delay		68.8	20.1			89.7	
Approach LOS		E	C			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 49.0	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy

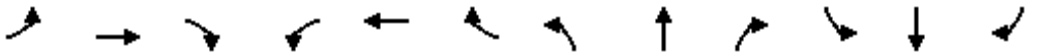




Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	309	2393	1574	891	126	127	184
v/c Ratio	0.76	0.91	0.80	0.76	0.69	0.70	0.83
Control Delay	39.4	27.1	17.8	7.4	95.3	95.8	81.3
Queue Delay	0.0	45.5	7.7	3.2	0.2	0.2	0.0
Total Delay	39.4	72.6	25.5	10.6	95.6	96.1	81.3
Queue Length 50th (ft)	225	1335	614	154	153	155	152
Queue Length 95th (ft)	m258	m1270	m985	m528	225	226	237
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	418	2616	1957	1166	344	344	369
Starvation Cap Reductn	0	481	238	181	0	0	0
Spillback Cap Reductn	0	54	354	0	30	30	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.12	0.98	0.90	0.40	0.40	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	2202	0	0	1448	820	233	0	169	0	0	0
Future Volume (veh/h)	284	2202	0	0	1448	820	233	0	169	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	309	2393	0	0	1574	0	253	0	184			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	328	2591	0	0	2078		460	0	205			
Arrive On Green	0.17	1.00	0.00	0.00	0.21	0.00	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	3563	0	1585			
Grp Volume(v), veh/h	309	2393	0	0	1574	0	253	0	184			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	20.5	0.0	0.0	0.0	82.0	0.0	12.0	0.0	20.6			
Cycle Q Clear(g_c), s	20.5	0.0	0.0	0.0	82.0	0.0	12.0	0.0	20.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	328	2591	0	0	2078		460	0	205			
V/C Ratio(X)	0.94	0.92	0.00	0.00	0.76		0.55	0.00	0.90			
Avail Cap(c_a), veh/h	382	2591	0	0	2078		730	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.13	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	54.2	0.0	0.0	0.0	57.9	0.0	73.5	0.0	77.2			
Incr Delay (d2), s/veh	4.8	0.7	0.0	0.0	0.4	0.0	0.4	0.0	12.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	13.7	0.3	0.0	0.0	36.0	0.0	5.4	0.0	8.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	0.7	0.0	0.0	58.2	0.0	73.9	0.0	89.7			
LnGrp LOS	E	A	A	A	E		E	A	F			
Approach Vol, veh/h		2702			1574	A		437				
Approach Delay, s/veh		7.4			58.2			80.5				
Approach LOS		A			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		150.7			28.5	122.2		29.3				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			22.5	84.0		22.6				
Green Ext Time (p_c), s		109.3			0.5	10.4		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

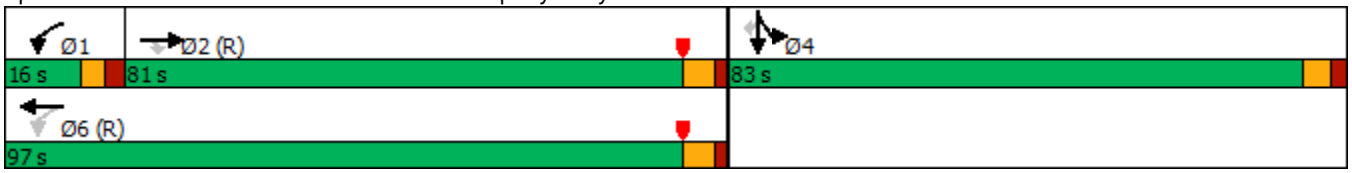
User approved volume balancing among the lanes for turning movement.

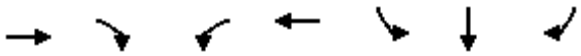
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1404	291	171	1597	1083	0	751
Future Volume (vph)	1404	291	171	1597	1083	0	751
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	96.7	96.2	71.3	71.3	71.3
Actuated g/C Ratio	0.42	0.42	0.54	0.53	0.40	0.40	0.40
v/c Ratio	1.13	0.37	0.93	1.00	0.86	0.86	0.70
Control Delay	105.0	5.2	82.5	46.2	63.8	63.8	45.3
Queue Delay	0.0	0.0	0.0	4.8	53.1	53.1	0.0
Total Delay	105.0	5.2	82.5	51.0	116.9	116.9	45.3
LOS	F	A	F	D	F	F	D
Approach Delay	87.9			54.0		87.6	
Approach LOS	F			D		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 76.5	Intersection LOS: E
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





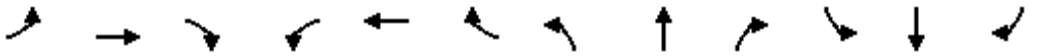
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1494	310	182	1699	576	576	799
v/c Ratio	1.13	0.37	0.93	1.00	0.86	0.86	0.70
Control Delay	105.0	5.2	82.5	46.2	63.8	63.8	45.3
Queue Delay	0.0	0.0	0.0	4.8	53.1	53.1	0.0
Total Delay	105.0	5.2	82.5	51.0	116.9	116.9	45.3
Queue Length 50th (ft)	~1064	44	~192	~1152	635	635	406
Queue Length 95th (ft)	#1207	m66	m#337	#1283	807	807	481
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	838	195	1706	717	717	1220
Starvation Cap Reductn	0	0	0	31	0	0	0
Spillback Cap Reductn	0	0	0	0	287	287	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.37	0.93	1.01	1.34	1.34	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1404	291	171	1597	0	0	0	0	1083	0	751
Future Volume (veh/h)	0	1404	291	171	1597	0	0	0	0	1083	0	751
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1494	310	182	1699	0				1152	0	799
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1555	760	203	1843	0				1291	0	1149
Arrive On Green	0.00	0.96	0.96	0.06	0.57	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	3170
Grp Volume(v), veh/h	0	1494	310	182	1699	0				1152	0	799
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	43.6	2.4	9.3	85.5	0.0				54.8	0.0	38.7
Cycle Q Clear(g_c), s	0.0	43.6	2.4	9.3	85.5	0.0				54.8	0.0	38.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1555	760	203	1843	0				1291	0	1149
V/C Ratio(X)	0.00	0.96	0.41	0.90	0.92	0.00				0.89	0.00	0.70
Avail Cap(c_a), veh/h	0	1555	760	203	1843	0				1520	0	1353
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.52	0.52	0.51	0.51	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.8	2.0	34.9	35.2	0.0				54.1	0.0	48.9
Incr Delay (d2), s/veh	0.0	9.6	0.8	22.4	5.1	0.0				6.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	0.7	5.1	33.5	0.0				24.9	0.0	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.4	2.8	57.3	40.4	0.0				60.4	0.0	50.2
LnGrp LOS	A	B	A	E	D	A				E	A	D
Approach Vol, veh/h		1804			1881						1951	
Approach Delay, s/veh		10.8			42.0						56.2	
Approach LOS		B			D						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	92.6		71.4		108.6
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	11.3	45.6		56.8		87.5
Green Ext Time (p_c), s	0.0	23.2		8.4		3.0

Intersection Summary		
HCM 6th Ctrl Delay		36.9
HCM 6th LOS		D

Notes

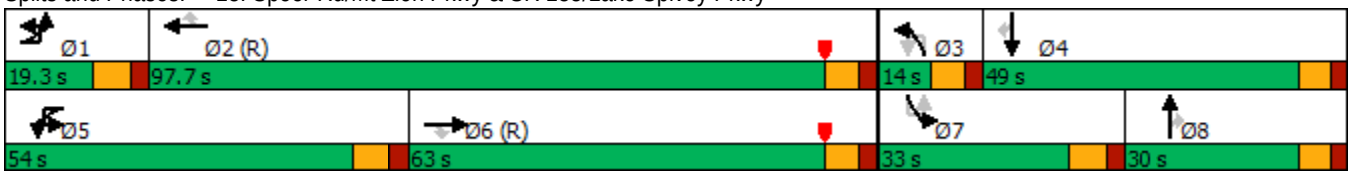
User approved volume balancing among the lanes for turning movement.

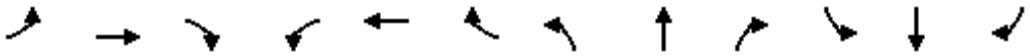
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	866	117	733	1075	288	73	172	293	402	356	161
Future Volume (vph)	141	866	117	733	1075	288	73	172	293	402	356	161
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	12.9	66.1	66.1	45.5	98.7	98.7	7.0	14.9	14.9	24.8	33.2	33.2
Actuated g/C Ratio	0.07	0.37	0.37	0.25	0.55	0.55	0.04	0.08	0.08	0.14	0.18	0.18
v/c Ratio	0.60	0.80	0.17	0.89	0.65	0.30	0.57	0.62	0.60	0.89	0.58	0.39
Control Delay	89.8	50.7	5.3	71.6	33.9	6.1	102.1	88.8	12.0	97.6	70.2	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.8	50.7	5.3	71.6	33.9	6.1	102.1	88.8	12.0	97.6	70.2	10.1
LOS	F	D	A	E	C	A	F	F	B	F	E	B
Approach Delay		50.9			43.3			48.8			71.7	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 51.3	Intersection LOS: D
Intersection Capacity Utilization 89.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	148	912	123	772	1132	303	77	181	308	423	375	169
v/c Ratio	0.60	0.80	0.17	0.89	0.65	0.30	0.57	0.62	0.60	0.89	0.58	0.39
Control Delay	89.8	50.7	5.3	71.6	33.9	6.1	102.1	88.8	12.0	97.6	70.2	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.8	50.7	5.3	71.6	33.9	6.1	102.1	88.8	12.0	97.6	70.2	10.1
Queue Length 50th (ft)	80	375	13	486	473	32	46	111	0	256	215	0
Queue Length 95th (ft)	122	#675	42	m501	m507	m47	79	153	53	#343	265	69
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	256	1143	707	914	1752	1005	135	460	630	488	833	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.80	0.17	0.84	0.65	0.30	0.57	0.39	0.49	0.87	0.45	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	866	117	733	1075	288	73	172	293	402	356	161
Future Volume (veh/h)	141	866	117	733	1075	288	73	172	293	402	356	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	912	123	772	1132	303	77	181	308	423	375	169
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	185	1107	555	810	1724	843	113	435	342	462	804	359
Arrive On Green	0.11	0.70	0.70	0.47	1.00	1.00	0.03	0.12	0.12	0.13	0.23	0.23
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	148	912	123	772	1132	303	77	181	308	423	375	169
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	7.5	36.8	4.9	38.6	0.0	0.0	4.0	8.5	19.6	21.7	16.4	16.6
Cycle Q Clear(g_c), s	7.5	36.8	4.9	38.6	0.0	0.0	4.0	8.5	19.6	21.7	16.4	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1107	555	810	1724	843	113	435	342	462	804	359
V/C Ratio(X)	0.80	0.82	0.22	0.95	0.66	0.36	0.68	0.42	0.90	0.92	0.47	0.47
Avail Cap(c_a), veh/h	227	1107	555	893	1724	843	136	462	363	491	837	373
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.31	0.31	0.31	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.5	23.0	18.2	46.8	0.0	0.0	86.1	73.0	77.9	77.0	60.2	60.3
Incr Delay (d2), s/veh	12.8	5.7	0.7	7.9	0.6	0.4	10.2	0.6	23.9	21.2	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	9.3	1.8	14.4	0.1	0.1	1.9	3.9	8.1	11.0	7.5	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	28.7	19.0	54.8	0.6	0.4	96.3	73.7	101.8	98.1	60.6	61.3
LnGrp LOS	F	C	B	D	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1183			2207			566			967	
Approach Delay, s/veh		35.7			19.5			92.1			77.2	
Approach LOS		D			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	102.8	12.8	47.3	49.7	70.2	31.5	28.6
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	9.5	2.0	6.0	18.6	40.6	38.8	23.7	21.6
Green Ext Time (p_c), s	0.1	31.8	0.0	2.9	1.6	9.9	0.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	115	450	322	117	122	190
Future Vol, veh/h	115	450	322	117	122	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	128	500	358	130	136	211

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	488	0	-	0	1114	358
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	756	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1086	-	-	-	230	686
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1086	-	-	-	203	686
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	624	-
Stage 2	-	-	-	-	464	-

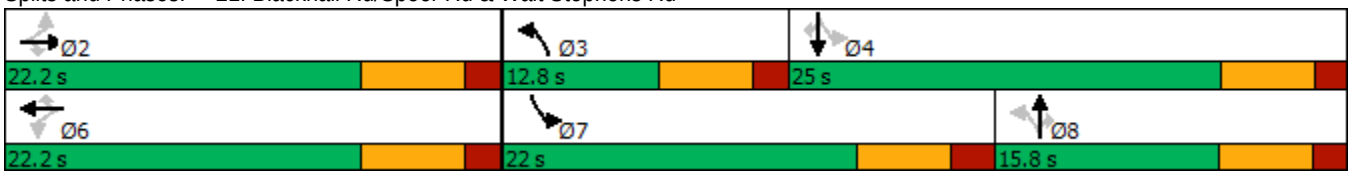
Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	28.2
HCM LOS			D

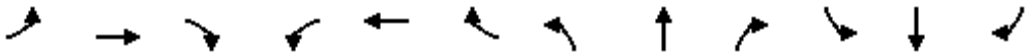
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1086	-	-	-	203	686
HCM Lane V/C Ratio	0.118	-	-	-	0.668	0.308
HCM Control Delay (s)	8.8	-	-	-	52.5	12.6
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	4.1	1.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	472	78	130	385	317	43	173	110	676	422	18
Future Volume (vph)	29	472	78	130	385	317	43	173	110	676	422	18
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	17.0	10.0	10.0	31.6	27.0	27.0
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.28	0.17	0.17	0.53	0.45	0.45
v/c Ratio	0.19	0.96	0.13	1.05	0.78	0.33	0.12	0.56	0.22	1.00	0.51	0.02
Control Delay	21.0	56.6	0.4	124.4	34.0	3.6	9.5	30.9	1.0	50.4	17.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	56.6	0.4	124.4	34.0	3.6	9.5	30.9	1.0	50.4	17.1	0.1
LOS	C	E	A	F	C	A	A	C	A	D	B	A
Approach Delay		47.3			36.5			18.0			37.0	
Approach LOS		D			D			B			D	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 60		
Natural Cycle: 80		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.05		
Intersection Signal Delay: 36.8	Intersection LOS: D	
Intersection Capacity Utilization 104.0%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd



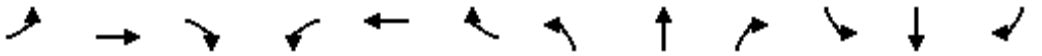


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	29	477	79	131	389	320	43	175	111	683	426	18
v/c Ratio	0.19	0.96	0.13	1.05	0.78	0.33	0.12	0.56	0.22	1.00	0.51	0.02
Control Delay	21.0	56.6	0.4	124.4	34.0	3.6	9.5	30.9	1.0	50.4	17.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	56.6	0.4	124.4	34.0	3.6	9.5	30.9	1.0	50.4	17.1	0.1
Queue Length 50th (ft)	8	169	0	~53	130	0	7	59	0	173	84	0
Queue Length 95th (ft)	28	#335	0	#145	#254	27	19	114	0	#361	#236	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	151	498	621	125	498	980	366	310	495	683	837	802
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.96	0.13	1.05	0.78	0.33	0.12	0.56	0.22	1.00	0.51	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	472	78	130	385	317	43	173	110	676	422	18
Future Volume (veh/h)	29	472	78	130	385	317	43	173	110	676	422	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	477	79	131	389	320	43	175	111	683	426	18
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	175	500	423	134	500	745	384	312	264	677	705	598
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.38	0.38
Sat Flow, veh/h	746	1885	1598	860	1885	2812	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	29	477	79	131	389	320	43	175	111	683	426	18
Grp Sat Flow(s),veh/h/ln	746	1885	1598	860	1885	1406	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.2	14.9	2.3	1.0	11.5	5.7	1.1	5.2	3.8	15.8	11.0	0.4
Cycle Q Clear(g_c), s	13.7	14.9	2.3	15.9	11.5	5.7	1.1	5.2	3.8	15.8	11.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	500	423	134	500	745	384	312	264	677	705	598
V/C Ratio(X)	0.17	0.95	0.19	0.98	0.78	0.43	0.11	0.56	0.42	1.01	0.60	0.03
Avail Cap(c_a), veh/h	175	500	423	134	500	745	485	312	264	677	705	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	21.7	17.0	29.9	20.4	18.3	18.4	23.0	22.4	15.9	15.1	11.8
Incr Delay (d2), s/veh	0.9	29.5	0.5	71.6	8.9	0.8	0.1	2.3	1.1	36.7	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	9.6	0.8	4.4	5.5	1.7	0.4	2.2	1.3	12.8	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	51.2	17.5	101.6	29.3	19.1	18.5	25.3	23.5	52.6	16.5	11.8
LnGrp LOS	C	D	B	F	C	B	B	C	C	F	B	B
Approach Vol, veh/h		585			840			329			1127	
Approach Delay, s/veh		45.5			36.7			23.8			38.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.4	28.4		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		16.9	3.1	13.0		17.9	17.8	7.2				
Green Ext Time (p_c), s		0.0	0.0	1.3		0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

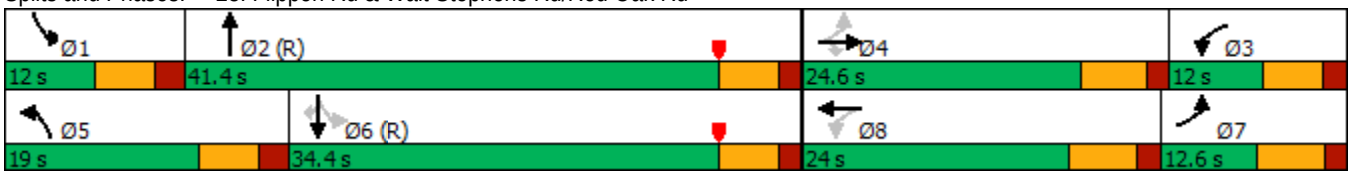
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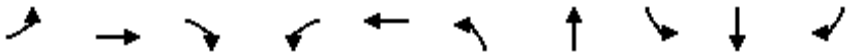
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	352	342	626	43	188	442	404	54	572	326
Future Volume (vph)	352	342	626	43	188	442	404	54	572	326
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8				6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	27.5	23.4	23.4	21.7	15.3	13.0	38.2	34.4	28.8	28.8
Actuated g/C Ratio	0.31	0.26	0.26	0.24	0.17	0.14	0.42	0.38	0.32	0.32
v/c Ratio	1.06	0.75	1.01	0.22	0.74	0.96	0.60	0.17	1.02	0.47
Control Delay	97.6	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.6	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	4.9
LOS	F	D	E	C	D	E	B	B	E	A
Approach Delay		65.0			44.6		43.5		47.4	
Approach LOS		E			D		D		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 53.0	Intersection LOS: D
Intersection Capacity Utilization 93.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





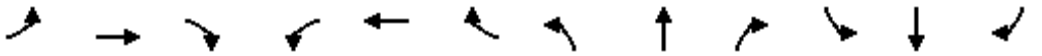
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	378	368	673	46	237	475	472	58	615	351
v/c Ratio	1.06	0.75	1.01	0.22	0.74	0.96	0.60	0.17	1.02	0.47
Control Delay	97.6	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.6	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	4.9
Queue Length 50th (ft)	~206	208	~281	17	123	125	110	15	~362	0
Queue Length 95th (ft)	#360	#378	#496	41	198	m#183	m147	34	#580	59
Internal Link Dist (ft)		1944			3175		1869		1330	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	358	488	665	208	373	495	784	346	601	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.75	1.01	0.22	0.64	0.96	0.60	0.17	1.02	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	342	626	43	188	33	442	404	35	54	572	326
Future Volume (veh/h)	352	342	626	43	188	33	442	404	35	54	572	326
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	378	368	0	46	202	35	475	434	38	58	615	351
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	279	390		162	240	42	499	735	64	393	641	543
Arrive On Green	0.10	0.21	0.00	0.05	0.15	0.15	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	1795	1885	1598	1795	1565	271	3456	1695	148	1795	1885	1598
Grp Volume(v), veh/h	378	368	0	46	0	237	475	0	472	58	615	351
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1836	1728	0	1844	1795	1885	1598
Q Serve(g_s), s	8.8	17.3	0.0	0.0	0.0	11.3	12.3	0.0	17.5	1.8	28.8	10.9
Cycle Q Clear(g_c), s	8.8	17.3	0.0	0.0	0.0	11.3	12.3	0.0	17.5	1.8	28.8	10.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	279	390		162	0	281	499	0	799	393	641	543
V/C Ratio(X)	1.36	0.94		0.28	0.00	0.84	0.95	0.00	0.59	0.15	0.96	0.65
Avail Cap(c_a), veh/h	279	390		204	0	365	499	0	799	421	641	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.28	0.28	0.00	1.00	0.00	1.00	0.30	0.00	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	35.2	0.0	41.0	0.0	37.1	38.2	0.0	19.4	17.7	29.1	10.8
Incr Delay (d2), s/veh	167.2	13.2	0.0	1.0	0.0	13.0	12.5	0.0	1.0	0.2	26.9	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.7	8.9	0.0	1.0	0.0	5.9	5.8	0.0	6.9	0.7	16.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	206.1	48.4	0.0	41.9	0.0	50.1	50.7	0.0	20.4	17.9	56.0	16.6
LnGrp LOS	F	D		D	A	D	D	A	C	B	E	B
Approach Vol, veh/h		746	A		283			947			1024	
Approach Delay, s/veh		128.3			48.8			35.6			40.3	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	44.6	10.2	24.6	19.0	36.2	14.9	19.9
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	3.8	19.5	2.0	19.3	14.3	30.8	10.8	13.3
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	61.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	12	14	0	40	16	704	17	44	938	28
Future Vol, veh/h	20	0	12	14	0	40	16	704	17	44	938	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	1	1	0
Mvmt Flow	22	0	13	16	0	44	18	782	19	49	1042	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1990	1977	1042	1980	1989	782	1073	0	0	801	0	0
Stage 1	1140	1140	-	818	818	-	-	-	-	-	-	-
Stage 2	850	837	-	1162	1171	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	46	63	281	46	62	394	657	-	-	827	-	-
Stage 1	247	278	-	370	393	-	-	-	-	-	-	-
Stage 2	358	385	-	237	269	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	58	281	41	57	394	657	-	-	827	-	-
Mov Cap-2 Maneuver	38	58	-	41	57	-	-	-	-	-	-	-
Stage 1	240	262	-	360	382	-	-	-	-	-	-	-
Stage 2	309	375	-	212	253	-	-	-	-	-	-	-

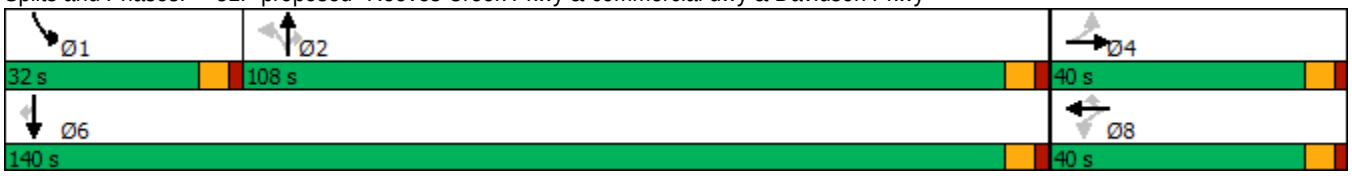
Approach	EB	WB	NB	SB
HCM Control Delay, s	125.5	47.3	0.2	0.4
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	657	-	-	38	281	41	394	827	-	-
HCM Lane V/C Ratio	0.027	-	-	0.585	0.047	0.379	0.113	0.059	-	-
HCM Control Delay (s)	10.6	-	-	189.8	18.4	138.9	15.3	9.6	-	-
HCM Lane LOS	B	-	-	F	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.1	0.1	1.3	0.4	0.2	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	43	17	166	23	260	8	823	212	377	527	56
Future Volume (vph)	43	17	166	23	260	8	823	212	377	527	56
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4		8			2		1	6	
Permitted Phases	4		8		8	2		2			6
Detector Phase	4	4	8	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0	108.0	108.0	108.0	32.0	140.0	140.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	22.2%	60.0%	60.0%	60.0%	17.8%	77.8%	77.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	30.0	30.0		30.0	30.0	103.8	103.8	103.8	24.3	134.1	134.1
Actuated g/C Ratio	0.17	0.17		0.17	0.17	0.59	0.59	0.59	0.14	0.76	0.76
v/c Ratio	0.43	0.08		0.89	0.56	0.02	0.82	0.23	0.87	0.40	0.05
Control Delay	77.7	48.3		106.1	10.4	17.1	37.3	8.5	92.8	8.6	1.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.7	48.3		106.1	10.4	17.1	37.3	8.5	92.8	8.6	1.3
LOS	E	D		F	B	B	D	A	F	A	A
Approach Delay		67.4		50.7			31.3			41.2	
Approach LOS		E		D			C			D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 176.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 39.5	Intersection LOS: D
Intersection Capacity Utilization 86.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy



31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	48	26	210	289	9	914	236	419	586	62
v/c Ratio	0.43	0.08	0.89	0.56	0.02	0.82	0.23	0.87	0.40	0.05
Control Delay	77.7	48.3	106.1	10.4	17.1	37.3	8.5	92.8	8.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.7	48.3	106.1	10.4	17.1	37.3	8.5	92.8	8.6	1.3
Queue Length 50th (ft)	50	19	240	0	5	867	55	250	229	0
Queue Length 95th (ft)	100	51	#375	90	14	1106	107	#327	300	13
Internal Link Dist (ft)		467	910			658			1599	
Turn Bay Length (ft)										
Base Capacity (vph)	127	358	269	545	496	1119	1005	517	1447	1245
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.07	0.78	0.53	0.02	0.82	0.23	0.81	0.40	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	17	6	166	23	260	8	823	212	377	527	56
Future Volume (veh/h)	43	17	6	166	23	260	8	823	212	377	527	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	19	7	184	26	289	9	914	236	419	586	62
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	81	250	92	263	32	304	501	1101	933	461	1414	1199
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.58	0.58	0.58	0.13	0.74	0.74
Sat Flow, veh/h	1081	1324	488	1194	169	1610	796	1900	1610	3510	1900	1610
Grp Volume(v), veh/h	48	0	26	210	0	289	9	914	236	419	586	62
Grp Sat Flow(s),veh/h/ln	1081	0	1812	1362	0	1610	796	1900	1610	1755	1900	1610
Q Serve(g_s), s	6.9	0.0	2.1	25.0	0.0	31.9	0.9	70.1	13.0	21.2	20.5	1.8
Cycle Q Clear(g_c), s	34.0	0.0	2.1	27.1	0.0	31.9	0.9	70.1	13.0	21.2	20.5	1.8
Prop In Lane	1.00		0.27	0.88		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	0	342	295	0	304	501	1101	933	461	1414	1199
V/C Ratio(X)	0.59	0.00	0.08	0.71	0.00	0.95	0.02	0.83	0.25	0.91	0.41	0.05
Avail Cap(c_a), veh/h	81	0	342	295	0	304	501	1101	933	507	1414	1199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.1	0.0	60.1	71.2	0.0	72.2	16.1	30.6	18.6	77.1	8.5	6.1
Incr Delay (d2), s/veh	10.9	0.0	0.1	7.8	0.0	38.4	0.1	7.3	0.7	19.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.0	10.0	0.0	16.4	0.2	33.0	5.0	10.9	8.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.9	0.0	60.2	79.1	0.0	110.5	16.1	37.9	19.3	96.3	9.4	6.2
LnGrp LOS	F	A	E	E	A	F	B	D	B	F	A	A
Approach Vol, veh/h		74			499			1159			1067	
Approach Delay, s/veh		84.7			97.3			34.0			43.3	
Approach LOS		F			F			C			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.7	110.3		40.0		140.0		40.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	26.0	102.0		34.0		134.0		34.0				
Max Q Clear Time (g_c+I1), s	23.2	72.1		36.0		22.5		33.9				
Green Ext Time (p_c), s	0.5	8.4		0.0		5.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			50.2									
HCM 6th LOS			D									

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	26	17	0	2	35	728	26	3	918	44
Future Vol, veh/h	33	0	26	17	0	2	35	728	26	3	918	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	0	29	19	0	2	39	809	29	3	1020	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1929	1942	1020	1952	1962	809	1069	0	0	838	0	0
Stage 1	1026	1026	-	887	887	-	-	-	-	-	-	-
Stage 2	903	916	-	1065	1075	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	51	66	290	49	64	384	660	-	-	805	-	-
Stage 1	286	315	-	341	365	-	-	-	-	-	-	-
Stage 2	335	354	-	272	298	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	48	62	290	42	60	384	660	-	-	805	-	-
Mov Cap-2 Maneuver	48	62	-	42	60	-	-	-	-	-	-	-
Stage 1	269	312	-	321	343	-	-	-	-	-	-	-
Stage 2	313	333	-	243	295	-	-	-	-	-	-	-

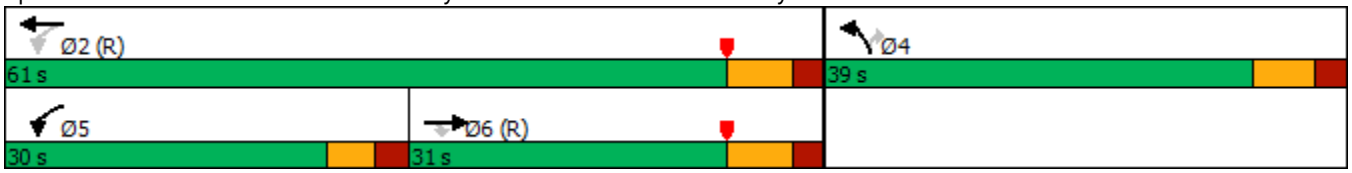
Approach	EB	WB	NB	SB
HCM Control Delay, s	117.9	133.7	0.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	660	-	-	48	290	42	384	805	-	-
HCM Lane V/C Ratio	0.059	-	-	0.764	0.1	0.45	0.006	0.004	-	-
HCM Control Delay (s)	10.8	-	-	196	18.8	147.7	14.4	9.5	0	-
HCM Lane LOS	B	-	-	F	C	F	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	3.1	0.3	1.6	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	702	467	522	1190	589	369
Future Volume (vph)	702	467	522	1190	589	369
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	23.7	23.7	54.9	53.7	31.9	31.9
Actuated g/C Ratio	0.24	0.24	0.55	0.54	0.32	0.32
v/c Ratio	1.11	0.73	1.31	0.79	1.39	0.59
Control Delay	104.4	10.1	182.9	23.0	218.8	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.4	10.1	182.9	23.0	218.8	6.6
LOS	F	B	F	C	F	A
Approach Delay	66.7			71.7	137.0	
Approach LOS	E			E	F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 86.5	Intersection LOS: F
Intersection Capacity Utilization 98.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	763	508	567	1293	640	401
v/c Ratio	1.11	0.73	1.31	0.79	1.39	0.59
Control Delay	104.4	10.1	182.9	23.0	218.8	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.4	10.1	182.9	23.0	218.8	6.6
Queue Length 50th (ft)	~293	0	~425	330	~547	0
Queue Length 95th (ft)	#412	104	#636	424	#761	74
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	689	696	432	1642	460	685
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.73	1.31	0.79	1.39	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	702	467	522	1190	589	369
Future Volume (veh/h)	702	467	522	1190	589	369
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	763	508	567	1293	640	401
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	695	310	444	1666	465	413
Arrive On Green	0.24	0.24	0.24	0.54	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	763	508	567	1293	640	401
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	23.7	23.7	23.9	33.1	31.9	30.5
Cycle Q Clear(g_c), s	23.7	23.7	23.9	33.1	31.9	30.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	695	310	444	1666	465	413
V/C Ratio(X)	1.10	1.64	1.28	0.78	1.38	0.97
Avail Cap(c_a), veh/h	695	310	444	1666	465	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	38.2	27.9	18.4	34.0	33.6
Incr Delay (d2), s/veh	63.8	301.2	141.5	3.6	182.9	36.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	32.9	23.9	11.1	33.8	22.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	101.9	339.4	169.4	22.0	217.0	70.0
LnGrp LOS	F	F	F	C	F	E
Approach Vol, veh/h	1271			1860	1041	
Approach Delay, s/veh	196.8			66.9	160.3	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.0		39.0	30.0	31.0
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		35.1		33.9	25.9	25.7
Green Ext Time (p_c), s		13.3		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	129.8
HCM 6th LOS	F

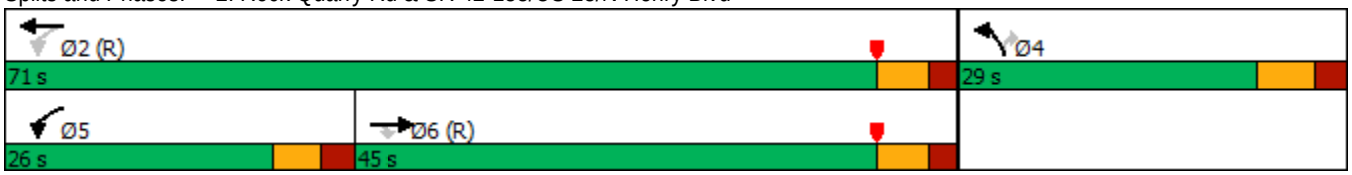
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	970	251	550	1565	196	469
Future Volume (vph)	970	251	550	1565	196	469
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	38.4	38.4	66.3	66.2	20.8	20.8
Actuated g/C Ratio	0.38	0.38	0.66	0.66	0.21	0.21
v/c Ratio	0.91	0.34	1.20	0.86	0.56	0.77
Control Delay	38.7	9.0	136.8	19.3	41.8	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	9.0	136.8	19.3	41.8	17.6
LOS	D	A	F	B	D	B
Approach Delay	32.6			49.9	24.7	
Approach LOS	C			D	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 40.4	Intersection LOS: D
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1021	264	579	1647	206	494
v/c Ratio	0.91	0.34	1.20	0.86	0.56	0.77
Control Delay	38.7	9.0	136.8	19.3	41.8	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	9.0	136.8	19.3	41.8	17.6
Queue Length 50th (ft)	188	1	~382	374	120	57
Queue Length 95th (ft)	#453	100	#619	535	190	184
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1141	777	481	1926	391	654
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.34	1.20	0.86	0.53	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	970	251	550	1565	196	469
Future Volume (veh/h)	970	251	550	1565	196	469
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1021	264	579	1647	206	494
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1152	617	450	1904	394	350
Arrive On Green	0.13	0.13	0.20	0.65	0.22	0.22
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	1021	264	579	1647	206	494
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	33.9	15.4	20.0	44.9	10.2	22.1
Cycle Q Clear(g_c), s	33.9	15.4	20.0	44.9	10.2	22.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1152	617	450	1904	394	350
V/C Ratio(X)	0.89	0.43	1.29	0.86	0.52	1.41
Avail Cap(c_a), veh/h	1152	617	450	1904	394	350
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	33.3	29.7	14.0	34.3	39.0
Incr Delay (d2), s/veh	9.2	1.9	145.3	5.5	1.7	200.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	6.8	23.2	13.1	4.5	36.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.6	35.3	174.9	19.6	36.0	239.8
LnGrp LOS	D	D	F	B	D	F
Approach Vol, veh/h	1285			2226	700	
Approach Delay, s/veh	47.4			60.0	179.8	
Approach LOS	D			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.0		29.0	26.0	45.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s		46.9		24.1	22.0	35.9
Green Ext Time (p_c), s		16.4		0.0	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	76.1
HCM 6th LOS	E

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1216	10	1769	11	3
Future Volume (vph)	1216	10	1769	11	3
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	87.0	87.0	87.0	13.0	13.0
Total Split (%)	87.0%	87.0%	87.0%	13.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	92.3	92.3	92.3	6.1	6.1
Actuated g/C Ratio	0.92	0.92	0.92	0.06	0.06
v/c Ratio	0.46	0.03	0.67	0.10	0.03
Control Delay	4.4	2.0	6.6	46.1	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.4	2.0	6.6	46.1	29.7
LOS	A	A	A	D	C
Approach Delay	4.4		6.6	42.6	
Approach LOS	A		A	D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1251	10	1805	11	3
v/c Ratio	0.46	0.03	0.67	0.10	0.03
Control Delay	4.4	2.0	6.6	46.1	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.4	2.0	6.6	46.1	29.7
Queue Length 50th (ft)	0	0	0	7	0
Queue Length 95th (ft)	m210	m2	644	25	9
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2710	373	2709	123	113
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.03	0.67	0.09	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1216	10	10	1769	11	3
Future Volume (veh/h)	1216	10	10	1769	11	3
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	1241	10	10	1805	11	3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2590	21	454	2547	29	26
Arrive On Green	1.00	1.00	1.00	1.00	0.02	0.02
Sat Flow, veh/h	3090	24	444	3040	1781	1585
Grp Volume(v), veh/h	610	641	10	1805	11	3
Grp Sat Flow(s),veh/h/ln	1481	1555	444	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.6	0.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.6	0.2
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1274	1337	454	2547	29	26
V/C Ratio(X)	0.48	0.48	0.02	0.71	0.38	0.12
Avail Cap(c_a), veh/h	1274	1337	454	2547	125	111
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.46	0.46	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	48.7	48.5
Incr Delay (d2), s/veh	1.0	0.9	0.0	0.8	8.2	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.3	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.9	0.0	0.8	56.9	50.5
LnGrp LOS	A	A	A	A	E	D
Approach Vol, veh/h	1251			1815	14	
Approach Delay, s/veh	1.0			0.8	55.5	
Approach LOS	A			A	E	

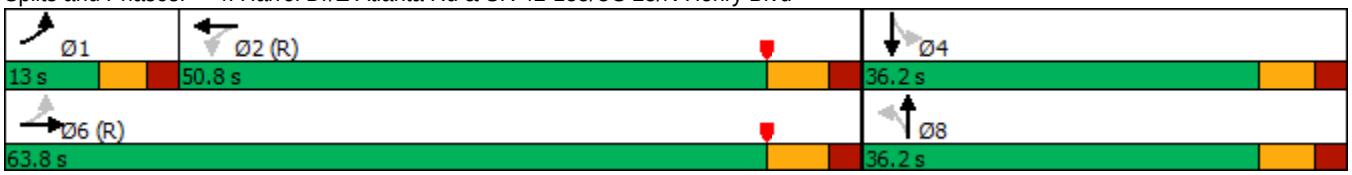
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		92.4		7.6		92.4
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		80.6		7.0		80.6
Max Q Clear Time (g_c+I1), s		2.0		2.6		2.0
Green Ext Time (p_c), s		56.4		0.0		29.4

Intersection Summary	
HCM 6th Ctrl Delay	1.1
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	288	899	21	1542	80	37	314	7
Future Volume (vph)	288	899	21	1542	80	37	314	7
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	13.0	63.8	50.8	50.8	36.2	36.2	36.2	36.2
Total Split (%)	13.0%	63.8%	50.8%	50.8%	36.2%	36.2%	36.2%	36.2%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	57.8	56.7	43.7	43.7		29.5		29.5
Actuated g/C Ratio	0.58	0.57	0.44	0.44		0.30		0.30
v/c Ratio	1.72	0.61	0.10	1.45		0.50		1.76
Control Delay	357.7	8.9	24.8	233.1		30.1		376.2
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	357.7	8.9	24.8	233.1		30.1		376.2
LOS	F	A	C	F		C		F
Approach Delay		87.7		230.7		30.1		376.2
Approach LOS		F		F		C		F

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.76	
Intersection Signal Delay: 196.9	Intersection LOS: F
Intersection Capacity Utilization 124.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





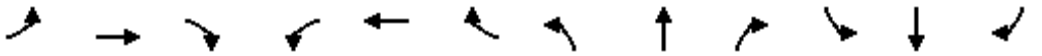
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	300	1028	22	1849	190	634
v/c Ratio	1.72	0.61	0.10	1.45	0.50	1.76
Control Delay	357.7	8.9	24.8	233.1	30.1	376.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	357.7	8.9	24.8	233.1	30.1	376.2
Queue Length 50th (ft)	~237	187	8	~838	85	~589
Queue Length 95th (ft)	m#296	m225	m17	#1023	155	#808
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	174	1687	227	1276	379	361
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.72	0.61	0.10	1.45	0.50	1.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	899	88	21	1542	233	80	37	65	314	7	288
Future Volume (veh/h)	288	899	88	21	1542	233	80	37	65	314	7	288
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	300	936	92	22	1606	243	83	39	68	327	7	300
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	182	1559	153	261	1131	168	208	103	144	263	4	191
Arrive On Green	0.07	0.57	0.57	0.14	0.14	0.14	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1570	2750	270	549	2588	384	530	348	489	707	15	648
Grp Volume(v), veh/h	300	509	519	22	905	944	190	0	0	634	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1525	549	1481	1490	1367	0	0	1370	0	0
Q Serve(g_s), s	7.0	22.3	22.3	3.6	43.7	43.7	0.0	0.0	0.0	18.7	0.0	0.0
Cycle Q Clear(g_c), s	7.0	22.3	22.3	12.9	43.7	43.7	10.8	0.0	0.0	29.5	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.26	0.44		0.36	0.52		0.47
Lane Grp Cap(c), veh/h	182	848	865	261	647	651	455	0	0	459	0	0
V/C Ratio(X)	1.65	0.60	0.60	0.08	1.40	1.45	0.42	0.00	0.00	1.38	0.00	0.00
Avail Cap(c_a), veh/h	182	848	865	261	647	651	455	0	0	459	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.33	0.70	0.70	0.70	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	14.2	14.2	33.8	42.8	42.8	28.4	0.0	0.0	37.3	0.0	0.0
Incr Delay (d2), s/veh	300.4	1.0	1.0	0.4	185.7	208.5	0.6	0.0	0.0	185.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	7.1	7.3	0.6	50.6	55.0	3.8	0.0	0.0	34.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	326.7	15.3	15.2	34.3	228.4	251.3	29.0	0.0	0.0	222.4	0.0	0.0
LnGrp LOS	F	B	B	C	F	F	C	A	A	F	A	A
Approach Vol, veh/h		1328			1871			190			634	
Approach Delay, s/veh		85.6			237.7			29.0			222.4	
Approach LOS		F			F			C			F	

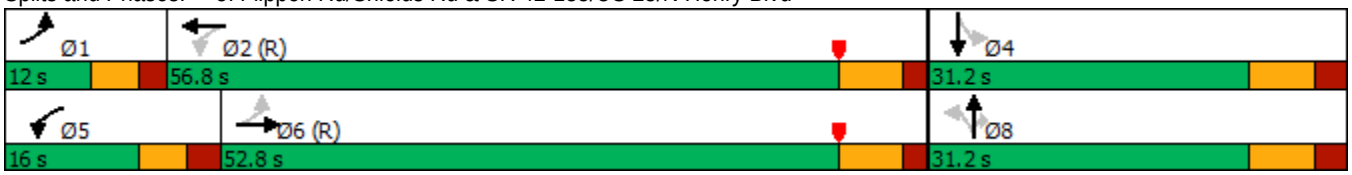
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.0	50.8		36.2		63.8		36.2				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	7.0	43.7		29.5		56.7		29.5				
Max Q Clear Time (g_c+I1), s	9.0	45.7		31.5		24.3		12.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		15.3		1.1				

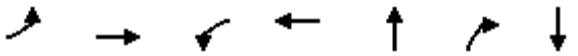
Intersection Summary												
HCM 6th Ctrl Delay			175.2									
HCM 6th LOS			F									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	5	1008	314	1807	376	18	300	30	52
Future Volume (vph)	5	1008	314	1807	376	18	300	30	52
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	52.8	16.0	56.8	31.2	31.2	31.2	31.2	31.2
Total Split (%)	12.0%	52.8%	16.0%	56.8%	31.2%	31.2%	31.2%	31.2%	31.2%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	53.2	46.1	62.5	59.8		23.8	23.8		23.8
Actuated g/C Ratio	0.53	0.46	0.62	0.60		0.24	0.24		0.24
v/c Ratio	0.03	0.94	1.25	1.08		1.34	0.70		0.60
Control Delay	7.6	40.8	146.5	53.7		205.5	32.6		45.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	7.6	40.8	146.5	53.7		205.5	32.6		45.6
LOS	A	D	F	D		F	C		D
Approach Delay		40.6		67.4		130.7			45.6
Approach LOS		D		E		F			D

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay: 69.8	Intersection LOS: E
Intersection Capacity Utilization 100.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





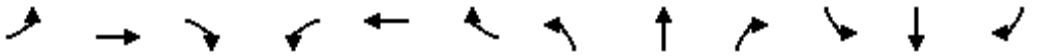
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	5	1242	331	1910	415	316	110
v/c Ratio	0.03	0.94	1.25	1.08	1.34	0.70	0.60
Control Delay	7.6	40.8	146.5	53.7	205.5	32.6	45.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	40.8	146.5	53.7	205.5	32.6	45.6
Queue Length 50th (ft)	1	378	~196	~704	~347	126	56
Queue Length 95th (ft)	5	#539	m91	m474	#532	225	#129
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	189	1315	264	1767	310	453	183
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.94	1.25	1.08	1.34	0.70	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1008	172	314	1807	8	376	18	300	30	52	22
Future Volume (veh/h)	5	1008	172	314	1807	8	376	18	300	30	52	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1061	181	331	1902	8	396	19	316	32	55	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	86	1145	195	273	1702	7	213	7	377	46	68	18
Arrive On Green	0.01	0.46	0.46	0.10	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	2484	423	1753	3054	13	597	29	1585	0	287	76
Grp Volume(v), veh/h	5	620	622	331	931	979	415	0	316	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1453	1753	1495	1572	626	0	1585	363	0	0
Q Serve(g_s), s	0.1	40.1	40.4	10.0	55.7	55.7	0.0	0.0	19.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	40.1	40.4	10.0	55.7	55.7	23.8	0.0	19.0	23.8	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.01	0.95		1.00	0.29		0.21
Lane Grp Cap(c), veh/h	86	670	670	273	833	876	219	0	377	133	0	0
V/C Ratio(X)	0.06	0.93	0.93	1.21	1.12	1.12	1.89	0.00	0.84	0.83	0.00	0.00
Avail Cap(c_a), veh/h	186	670	670	273	833	876	219	0	377	133	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.8	25.3	25.4	28.0	22.1	22.1	41.9	0.0	36.3	33.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	20.6	21.1	99.6	54.4	55.0	418.2	0.0	16.6	36.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	16.1	16.3	14.1	29.9	31.5	30.9	0.0	8.9	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	45.9	46.5	127.6	76.5	77.1	460.1	0.0	52.8	69.4	0.0	0.0
LnGrp LOS	C	D	D	F	F	F	F	A	D	E	A	A
Approach Vol, veh/h		1247			2241			731			110	
Approach Delay, s/veh		46.1			84.3			284.0			69.4	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	62.4		31.2	16.0	52.8		31.2				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.1		23.8	10.0	46.1		23.8				
Max Q Clear Time (g_c+I1), s	2.1	57.7		25.8	12.0	42.4		25.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		106.7
HCM 6th LOS		F

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	3	157	12	3	16	277	1816	25	9	872	72
Future Vol, veh/h	34	3	157	12	3	16	277	1816	25	9	872	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	36	3	165	13	3	17	292	1912	26	9	918	76

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2516	3496	497	2975	3508	956	994	0	0	1938	0	0
Stage 1	974	974	-	2496	2496	-	-	-	-	-	-	-
Stage 2	1542	2522	-	479	1012	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 14	6	519	~ 6	6	258	692	-	-	299	-	-
Stage 1	270	328	-	29	57	-	-	-	-	-	-	-
Stage 2	120	55	-	537	315	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 3	519	-	~ 3	258	692	-	-	299	-	-
Mov Cap-2 Maneuver	-	~ 3	-	-	~ 3	-	-	-	-	-	-	-
Stage 1	156	318	-	17	33	-	-	-	-	-	-	-
Stage 2	59	32	-	351	306	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			1.8	0.2
HCM LOS	-	-		

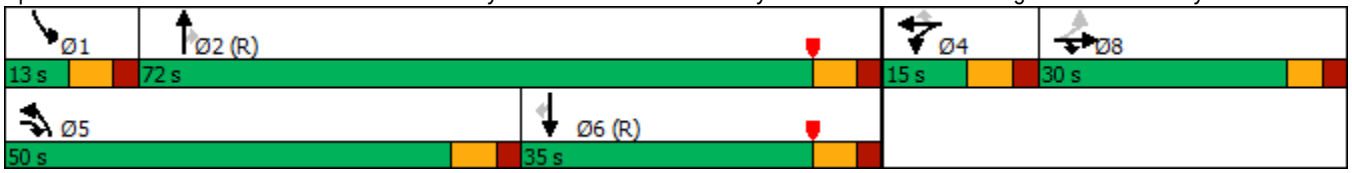
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	692	-	-	-	-	299	-	-
HCM Lane V/C Ratio	0.421	-	-	-	-	0.032	-	-
HCM Control Delay (s)	13.9	-	-	-	-	17.4	-	-
HCM Lane LOS	B	-	-	-	-	C	-	-
HCM 95th %tile Q(veh)	2.1	-	-	-	-	0.1	-	-

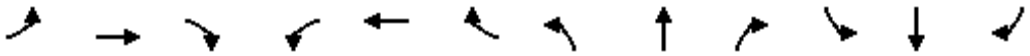
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	78	548	41	62	51	1048	721	45	25	370	268
Future Volume (vph)	156	78	548	41	62	51	1048	721	45	25	370	268
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	30.0	30.0		15.0	15.0	15.0	50.0	72.0	72.0	13.0	35.0	35.0
Total Split (%)	23.1%	23.1%		11.5%	11.5%	11.5%	38.5%	55.4%	55.4%	10.0%	26.9%	26.9%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	22.2	22.2	78.5	8.5	8.5	8.5	49.5	74.6	74.6	7.0	26.1	26.1
Actuated g/C Ratio	0.17	0.17	0.60	0.07	0.07	0.07	0.38	0.57	0.57	0.05	0.20	0.20
v/c Ratio	0.82	0.26	0.39	0.37	0.54	0.18	0.96	0.45	0.05	0.27	0.65	0.56
Control Delay	62.4	28.9	11.1	68.0	75.4	1.4	59.1	19.5	0.1	67.2	53.4	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	28.9	11.1	68.0	75.4	1.4	59.1	19.5	0.1	67.2	53.4	9.4
LOS	E	C	B	E	E	A	E	B	A	E	D	A
Approach Delay		23.1			49.0			41.9			36.2	
Approach LOS		C			D			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 36.8	Intersection LOS: D
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy



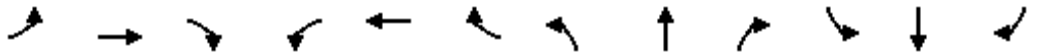


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	163	81	571	43	65	53	1092	751	47	26	385	279
v/c Ratio	0.82	0.26	0.39	0.37	0.54	0.18	0.96	0.45	0.05	0.27	0.65	0.56
Control Delay	62.4	28.9	11.1	68.0	75.4	1.4	59.1	19.5	0.1	67.2	53.4	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	28.9	11.1	68.0	75.4	1.4	59.1	19.5	0.1	67.2	53.4	9.4
Queue Length 50th (ft)	122	45	196	35	54	0	~536	224	0	22	157	0
Queue Length 95th (ft)	#236	82	259	76	#113	0	#670	276	0	54	211	79
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	214	343	1448	115	121	288	1139	1664	972	95	634	516
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.24	0.39	0.37	0.54	0.18	0.96	0.45	0.05	0.27	0.61	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	78	548	41	62	51	1048	721	45	25	370	268
Future Volume (veh/h)	156	78	548	41	62	51	1048	721	45	25	370	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	162	81	571	43	65	53	1092	751	47	26	385	279
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	265	316	1232	109	115	97	1012	1556	849	50	687	324
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.33	0.54	0.54	0.03	0.23	0.23
Sat Flow, veh/h	1570	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1397
Grp Volume(v), veh/h	162	81	571	43	65	53	1092	751	47	26	385	279
Grp Sat Flow(s),veh/h/ln	1570	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1397
Q Serve(g_s), s	13.1	5.4	18.5	3.0	4.4	4.2	43.2	21.0	1.8	1.9	14.9	24.9
Cycle Q Clear(g_c), s	13.1	5.4	18.5	3.0	4.4	4.2	43.2	21.0	1.8	1.9	14.9	24.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	316	1232	109	115	97	1012	1556	849	50	687	324
V/C Ratio(X)	0.61	0.26	0.46	0.39	0.57	0.54	1.08	0.48	0.06	0.52	0.56	0.86
Avail Cap(c_a), veh/h	290	345	1271	110	115	98	1012	1556	849	84	687	324
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	53.6	23.6	58.7	59.3	59.2	43.4	18.9	14.5	62.3	44.1	47.9
Incr Delay (d2), s/veh	3.4	0.5	0.3	2.8	7.1	7.0	52.2	1.1	0.1	21.1	3.3	24.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	2.6	6.0	1.5	2.3	1.9	22.9	6.9	0.7	1.1	5.7	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	54.0	23.9	61.4	66.4	66.2	95.6	20.0	14.6	83.4	47.3	72.5
LnGrp LOS	E	D	C	E	E	E	F	B	B	F	D	E
Approach Vol, veh/h		814			161			1890			690	
Approach Delay, s/veh		34.2			65.0			63.5			58.9	
Approach LOS		C			E			E			E	

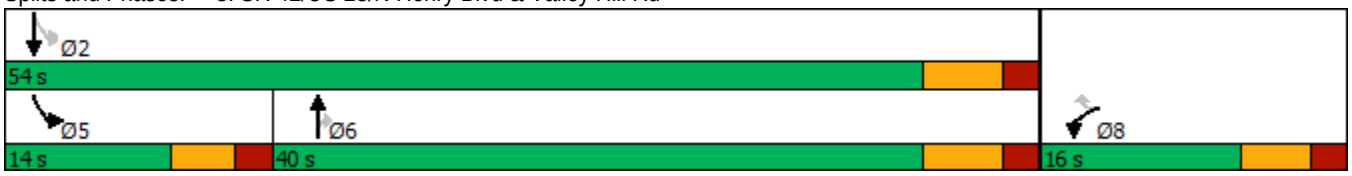
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	76.5		15.0	50.0	37.1		28.0				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	6.1	65.1		8.0	43.2	28.1		24.0				
Max Q Clear Time (g_c+I1), s	3.9	23.0		6.4	45.2	26.9		20.5				
Green Ext Time (p_c), s	0.0	11.9		0.1	0.0	0.6		1.4				

Intersection Summary			
HCM 6th Ctrl Delay		56.0	
HCM 6th LOS		E	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	180	302	857	80	162	442
Future Volume (vph)	180	302	857	80	162	442
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	40.0	40.0	14.0	54.0
Total Split (%)	22.9%	22.9%	57.1%	57.1%	20.0%	77.1%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.6	10.6	27.5	27.5	38.8	38.0
Actuated g/C Ratio	0.17	0.17	0.45	0.45	0.64	0.62
v/c Ratio	0.61	0.61	0.68	0.11	0.39	0.25
Control Delay	37.3	10.9	16.8	3.1	6.5	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	10.9	16.8	3.1	6.5	5.0
LOS	D	B	B	A	A	A
Approach Delay	20.7		15.7			5.4
Approach LOS	C		B			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	189	318	902	84	171	465
v/c Ratio	0.61	0.61	0.68	0.11	0.39	0.25
Control Delay	37.3	10.9	16.8	3.1	6.5	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	10.9	16.8	3.1	6.5	5.0
Queue Length 50th (ft)	69	8	143	0	20	32
Queue Length 95th (ft)	#169	79	203	20	38	48
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	312	521	1686	945	447	2311
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.61	0.53	0.09	0.38	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	180	302	857	80	162	442
Future Volume (veh/h)	180	302	857	80	162	442
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	189	0	902	84	171	465
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	281		1290	690	447	1921
Arrive On Green	0.16	0.00	0.44	0.44	0.12	0.65
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	189	0	902	84	171	465
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	6.1	0.0	15.0	1.9	2.6	4.0
Cycle Q Clear(g_c), s	6.1	0.0	15.0	1.9	2.6	4.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	281		1290	690	447	1921
V/C Ratio(X)	0.67		0.70	0.12	0.38	0.24
Avail Cap(c_a), veh/h	304		1646	881	478	2327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	13.9	10.2	9.0	4.5
Incr Delay (d2), s/veh	5.2	0.0	1.6	0.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	4.2	0.6	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.3	0.0	15.6	10.4	9.5	4.6
LnGrp LOS	C		B	B	A	A
Approach Vol, veh/h	189	A	986			636
Approach Delay, s/veh	29.3		15.1			5.9
Approach LOS	C		B			A

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		45.7			13.0	32.7	15.2
Change Period (Y+Rc), s		6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s		47.8			8.6	33.8	10.4
Max Q Clear Time (g_c+I1), s		6.0			4.6	17.0	8.1
Green Ext Time (p_c), s		6.3			0.1	9.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

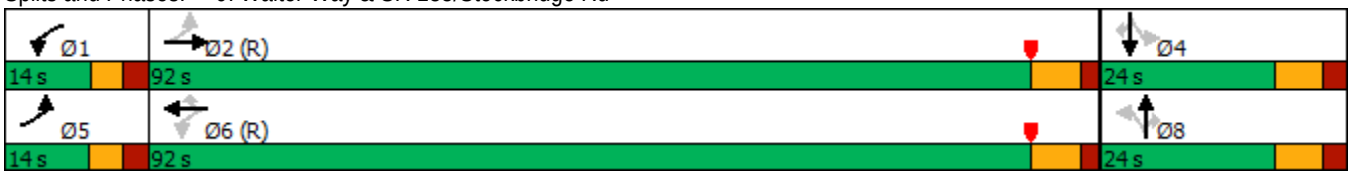
Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	832	66	1386	4	60	1	51	1	1	5
Future Volume (vph)	2	832	66	1386	4	60	1	51	1	1	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	14.0	92.0	14.0	92.0	92.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	70.8%	10.8%	70.8%	70.8%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	103.2	98.8	107.6	106.4	106.4		11.8	11.8		11.8	11.8
Actuated g/C Ratio	0.79	0.76	0.83	0.82	0.82		0.09	0.09		0.09	0.09
v/c Ratio	0.01	0.40	0.14	0.58	0.00		0.52	0.25		0.01	0.02
Control Delay	0.5	3.5	3.2	11.5	0.0		70.7	7.0		51.0	0.2
Queue Delay	0.0	0.1	0.0	0.1	0.0		0.0	0.0		0.0	0.0
Total Delay	0.5	3.6	3.2	11.6	0.0		70.7	7.0		51.0	0.2
LOS	A	A	A	B	A		E	A		D	A
Approach Delay		3.6		11.2			41.6			14.7	
Approach LOS		A		B			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 36 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd

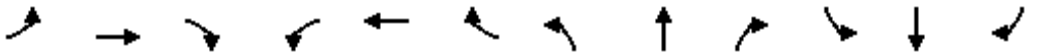




Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2	937	69	1459	4	64	54	2	5
v/c Ratio	0.01	0.40	0.14	0.58	0.00	0.52	0.25	0.01	0.02
Control Delay	0.5	3.5	3.2	11.5	0.0	70.7	7.0	51.0	0.2
Queue Delay	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	3.6	3.2	11.6	0.0	70.7	7.0	51.0	0.2
Queue Length 50th (ft)	0	61	2	63	0	53	0	2	0
Queue Length 95th (ft)	m0	1	m30	m694	m0	98	19	10	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	329	2342	501	2524	1310	176	276	205	276
Starvation Cap Reductn	0	289	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	131	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.46	0.14	0.61	0.00	0.36	0.20	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	832	58	66	1386	4	60	1	51	1	1	5
Future Volume (veh/h)	2	832	58	66	1386	4	60	1	51	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	876	61	69	1459	4	63	1	54	1	1	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	307	2010	140	535	2240	1134	55	0	206	42	29	206
Arrive On Green	0.01	1.00	1.00	0.08	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	2970	207	1781	3131	1585	0	4	1585	0	221	1585
Grp Volume(v), veh/h	2	462	475	69	1459	4	64	0	54	2	0	5
Grp Sat Flow(s),veh/h/ln	1781	1566	1611	1781	1566	1585	4	0	1585	221	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.4	0.0	0.0	16.9	0.0	4.0	16.9	0.0	0.4
Prop In Lane	1.00		0.13	1.00		1.00	0.98		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	307	1060	1090	535	2240	1134	55	0	206	70	0	206
V/C Ratio(X)	0.01	0.44	0.44	0.13	0.65	0.00	1.16	0.00	0.26	0.03	0.00	0.02
Avail Cap(c_a), veh/h	413	1060	1090	574	2240	1134	55	0	206	70	0	206
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.39	0.39	0.39	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.6	0.0	0.0	4.7	0.0	0.0	64.9	0.0	50.9	50.1	0.0	49.4
Incr Delay (d2), s/veh	0.0	1.2	1.1	0.0	0.6	0.0	169.4	0.0	0.7	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.4	0.2	0.0	4.4	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.6	1.2	1.1	4.8	0.6	0.0	234.3	0.0	51.6	50.3	0.0	49.4
LnGrp LOS	A	A	A	A	A	A	F	A	D	D	A	D
Approach Vol, veh/h		939			1532			118			7	
Approach Delay, s/veh		1.2			0.8			150.7			49.6	
Approach LOS		A			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	94.8		24.0	6.2	99.8		24.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 8.3	* 85		16.9	* 8.2	* 85		16.9				
Max Q Clear Time (g_c+I1), s	3.4	2.0		18.9	2.0	2.0		18.9				
Green Ext Time (p_c), s	0.0	16.1		0.0	0.0	38.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

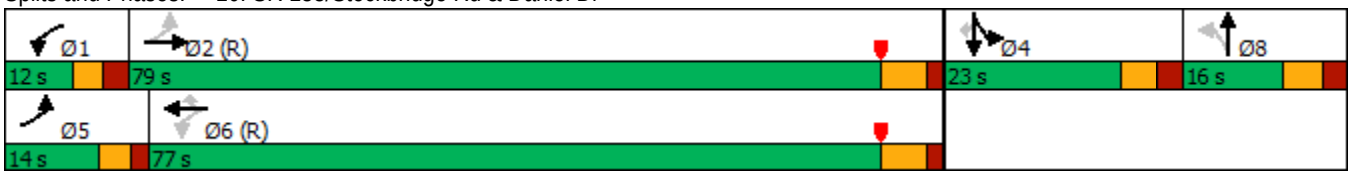
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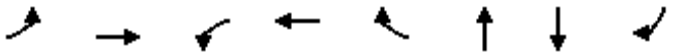
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	123	866	11	1416	45	14	4	7	194
Future Volume (vph)	123	866	11	1416	45	14	4	7	194
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	14.0	79.0	12.0	77.0	77.0	16.0	16.0	23.0	23.0
Total Split (%)	10.8%	60.8%	9.2%	59.2%	59.2%	12.3%	12.3%	17.7%	17.7%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	99.2	93.7	91.8	84.9	84.9		8.5	10.3	10.3
Actuated g/C Ratio	0.76	0.72	0.71	0.65	0.65		0.07	0.08	0.08
v/c Ratio	0.49	0.45	0.02	0.72	0.04		0.25	0.43	0.65
Control Delay	29.8	3.9	5.0	13.7	0.2		53.0	65.9	17.4
Queue Delay	0.0	0.0	0.0	1.3	0.0		0.0	0.0	0.3
Total Delay	29.8	3.9	5.0	15.0	0.2		53.0	65.9	17.7
LOS	C	A	A	B	A		D	E	B
Approach Delay		7.0		14.4			53.0	29.0	
Approach LOS		A		B			D	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 73.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr

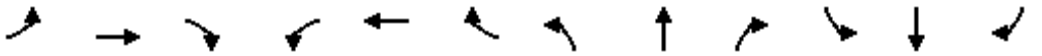




Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	127	923	11	1460	46	24	61	200
v/c Ratio	0.49	0.45	0.02	0.72	0.04	0.25	0.43	0.65
Control Delay	29.8	3.9	5.0	13.7	0.2	53.0	65.9	17.4
Queue Delay	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.3
Total Delay	29.8	3.9	5.0	15.0	0.2	53.0	65.9	17.7
Queue Length 50th (ft)	41	53	1	658	0	15	50	0
Queue Length 95th (ft)	m76	m45	m4	211	m1	44	95	74
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	272	2068	451	2015	1077	112	233	380
Starvation Cap Reductn	0	109	0	32	0	0	0	0
Spillback Cap Reductn	0	0	0	326	0	0	0	20
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.47	0.02	0.86	0.04	0.21	0.26	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	866	29	11	1416	45	14	4	6	52	7	194
Future Volume (veh/h)	123	866	29	11	1416	45	14	4	6	52	7	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	893	30	11	1460	46	14	4	6	54	7	200
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	348	1798	60	450	1899	961	36	10	16	207	27	207
Arrive On Green	0.09	1.00	1.00	0.03	1.00	1.00	0.04	0.04	0.04	0.13	0.13	0.13
Sat Flow, veh/h	1781	2841	95	1781	3131	1585	1016	290	435	1586	206	1585
Grp Volume(v), veh/h	127	452	471	11	1460	46	24	0	0	61	0	200
Grp Sat Flow(s),veh/h/ln	1781	1439	1498	1781	1566	1585	1741	0	0	1791	0	1585
Q Serve(g_s), s	3.5	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	4.0	0.0	16.3
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.3	0.0	0.0	1.8	0.0	0.0	4.0	0.0	16.3
Prop In Lane	1.00		0.06	1.00		1.00	0.58		0.25	0.89		1.00
Lane Grp Cap(c), veh/h	348	911	948	450	1899	961	62	0	0	234	0	207
V/C Ratio(X)	0.37	0.50	0.50	0.02	0.77	0.05	0.39	0.00	0.00	0.26	0.00	0.96
Avail Cap(c_a), veh/h	390	911	948	512	1899	961	130	0	0	234	0	207
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.79	0.79	0.79	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	0.0	9.2	0.0	0.0	61.3	0.0	0.0	50.8	0.0	56.2
Incr Delay (d2), s/veh	0.4	1.3	1.2	0.0	2.4	0.1	3.9	0.0	0.0	0.6	0.0	52.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.3	0.3	0.1	0.6	0.0	0.8	0.0	0.0	1.9	0.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	1.3	1.2	9.2	2.4	0.1	65.2	0.0	0.0	51.4	0.0	108.5
LnGrp LOS	A	A	A	A	A	A	E	A	A	D	A	F
Approach Vol, veh/h		1050			1517			24			261	
Approach Delay, s/veh		2.1			2.4			65.2			95.2	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	88.6		23.0	10.9	85.1		10.9				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 73		17.0	9.0	* 71		9.7				
Max Q Clear Time (g_c+I1), s	2.3	2.0		18.3	5.5	2.0		3.8				
Green Ext Time (p_c), s	0.0	15.6		0.0	0.1	36.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		11.3	
HCM 6th LOS		B	

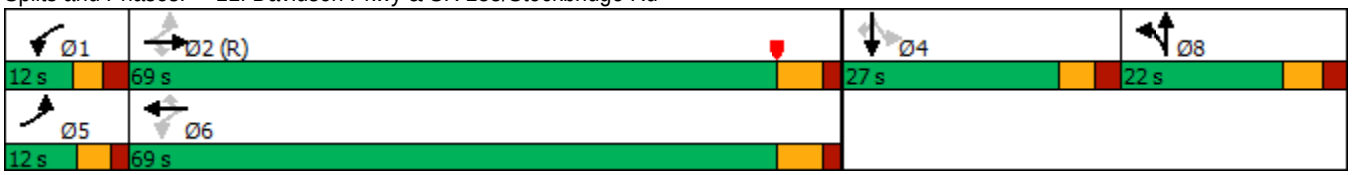
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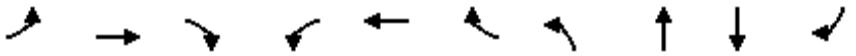
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	949	1156	40	1488	53	813	11	20	12	95
Future Volume (vph)	76	949	1156	40	1488	53	813	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	22.0	22.0	27.0	27.0	27.0
Total Split (%)	9.2%	53.1%	53.1%	9.2%	53.1%	53.1%	16.9%	16.9%	20.8%	20.8%	20.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	72.1	65.2	65.2	70.0	62.9	62.9	20.5	20.5		16.2	16.2
Actuated g/C Ratio	0.55	0.50	0.50	0.54	0.48	0.48	0.16	0.16		0.12	0.12
v/c Ratio	0.53	0.70	0.96	0.16	1.13	0.07	1.71	1.68		0.74	0.32
Control Delay	19.4	27.6	12.8	7.0	93.8	0.2	368.9	356.5		123.8	6.6
Queue Delay	0.0	1.5	24.2	0.0	1.8	0.0	0.0	0.0		0.0	0.1
Total Delay	19.4	29.1	37.0	7.0	95.6	0.2	368.9	356.5		123.8	6.7
LOS	B	C	D	A	F	A	F	F		F	A
Approach Delay		32.9			90.2			362.7		36.4	
Approach LOS		C			F			F		D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.71	
Intersection Signal Delay: 111.6	Intersection LOS: F
Intersection Capacity Utilization 98.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	999	1217	42	1566	56	454	448	34	100
v/c Ratio	0.53	0.70	0.96	0.16	1.13	0.07	1.71	1.68	0.74	0.32
Control Delay	19.4	27.6	12.8	7.0	93.8	0.2	368.9	356.5	123.8	6.6
Queue Delay	0.0	1.5	24.2	0.0	1.8	0.0	0.0	0.0	0.0	0.1
Total Delay	19.4	29.1	37.0	7.0	95.6	0.2	368.9	356.5	123.8	6.7
Queue Length 50th (ft)	28	415	539	2	~824	0	~615	~607	28	0
Queue Length 95th (ft)	m27	m367	m457	m11	#934	m1	#870	#866	#80	30
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	152	1435	1262	268	1385	829	265	266	60	362
Starvation Cap Reductn	0	247	109	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	469	0	0	0	0	23
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.84	1.06	0.16	1.71	0.07	1.71	1.68	0.57	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	949	1156	40	1488	53	813	11	32	20	12	95
Future Volume (veh/h)	76	949	1156	40	1488	53	813	11	32	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	999	0	42	1566	56	896	0	0	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	312	1666		431	1656	912	430	226	0	88	55	125
Arrive On Green	0.07	0.97	0.00	0.07	1.00	1.00	0.12	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1121	694	1585
Grp Volume(v), veh/h	80	999	0	42	1566	56	896	0	0	34	0	100
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1814	0	1585
Q Serve(g_s), s	2.3	3.5	0.0	1.2	0.0	0.0	15.7	0.0	0.0	2.3	0.0	8.1
Cycle Q Clear(g_c), s	2.3	3.5	0.0	1.2	0.0	0.0	15.7	0.0	0.0	2.3	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.62		1.00
Lane Grp Cap(c), veh/h	312	1666		431	1656	912	430	226	0	143	0	125
V/C Ratio(X)	0.26	0.60		0.10	0.95	0.06	2.08	0.00	0.00	0.24	0.00	0.80
Avail Cap(c_a), veh/h	330	1666		456	1656	912	430	226	0	293	0	256
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.63	0.63	0.63	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	1.0	0.0	9.7	0.0	0.0	57.2	0.0	0.0	56.2	0.0	58.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	8.4	0.0	495.0	0.0	0.0	0.8	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.5	0.0	0.4	1.9	0.0	36.7	0.0	0.0	1.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	1.1	0.0	9.8	8.4	0.0	552.2	0.0	0.0	57.1	0.0	70.0
LnGrp LOS	A	A		A	A	A	F	A	A	E	A	E
Approach Vol, veh/h		1079	A		1664			896			134	
Approach Delay, s/veh		1.7			8.1			552.2			66.7	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	81.6		16.2	10.7	81.1		22.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 63		21.0	7.0	* 63		15.7				
Max Q Clear Time (g_c+I1), s	3.2	5.5		10.1	4.3	2.0		17.7				
Green Ext Time (p_c), s	0.0	18.4		0.3	0.0	38.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		137.6
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

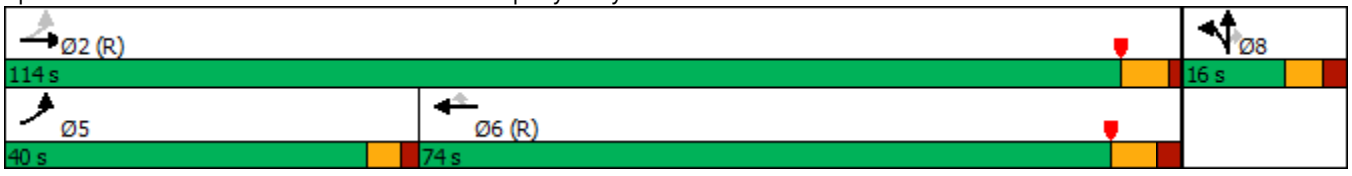
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	622	1844	1919	530	0	351
Future Volume (vph)	622	1844	1919	530	0	351
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	109.0	108.0	67.0	67.0	9.9	9.9
Actuated g/C Ratio	0.84	0.83	0.52	0.52	0.08	0.08
v/c Ratio	1.27	0.84	1.41	0.60	0.39	2.01
Control Delay	149.7	17.1	209.3	7.3	66.1	496.8
Queue Delay	0.0	11.2	0.6	2.4	5.9	0.3
Total Delay	149.7	28.3	209.9	9.7	72.1	497.1
LOS	F	C	F	A	E	F
Approach Delay		58.9	166.6		446.2	
Approach LOS		E	F		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.01	
Intersection Signal Delay: 137.6	Intersection LOS: F
Intersection Capacity Utilization 109.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





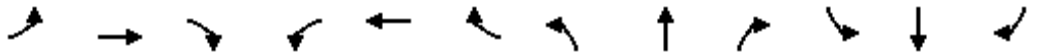
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	676	2004	2086	576	52	382
v/c Ratio	1.27	0.84	1.41	0.60	0.39	2.01
Control Delay	149.7	17.1	209.3	7.3	66.1	496.8
Queue Delay	0.0	11.2	0.6	2.4	5.9	0.3
Total Delay	149.7	28.3	209.9	9.7	72.1	497.1
Queue Length 50th (ft)	~671	690	~1243	140	43	~444
Queue Length 95th (ft)	m417	m393	m#869	m112	87	#646
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	534	2380	1476	953	134	190
Starvation Cap Reductn	0	387	87	246	0	0
Spillback Cap Reductn	0	173	228	0	46	4
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.27	1.01	1.67	0.81	0.59	2.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	622	1844	0	0	1919	530	48	0	351	0	0	0
Future Volume (veh/h)	622	1844	0	0	1919	530	48	0	351	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	676	2004	0	0	2086	576	52	0	382			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	535	2369	0	0	1483	817	136	0	121			
Arrive On Green	0.54	1.00	0.00	0.00	0.52	0.52	0.08	0.00	0.08			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	676	2004	0	0	2086	576	52	0	382			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	35.0	0.0	0.0	0.0	67.0	36.0	3.6	0.0	9.9			
Cycle Q Clear(g_c), s	35.0	0.0	0.0	0.0	67.0	36.0	3.6	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	535	2369	0	0	1483	817	136	0	121			
V/C Ratio(X)	1.26	0.85	0.00	0.00	1.41	0.71	0.38	0.00	3.16			
Avail Cap(c_a), veh/h	535	2391	0	0	1483	817	136	0	121			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	0.0	0.0	0.0	31.5	24.0	57.1	0.0	60.1			
Incr Delay (d2), s/veh	120.1	0.4	0.0	0.0	183.3	0.5	1.8	0.0	995.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	26.4	0.1	0.0	0.0	59.1	12.7	1.6	0.0	37.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	145.6	0.4	0.0	0.0	214.8	24.5	58.9	0.0	1055.5			
LnGrp LOS	F	A	A	A	F	C	E	A	F			
Approach Vol, veh/h		2680			2662			434				
Approach Delay, s/veh		37.0			173.6			936.1				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			40.0	74.0		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			37.0	69.0		11.9				
Green Ext Time (p_c), s		76.4			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	167.5
HCM 6th LOS	F

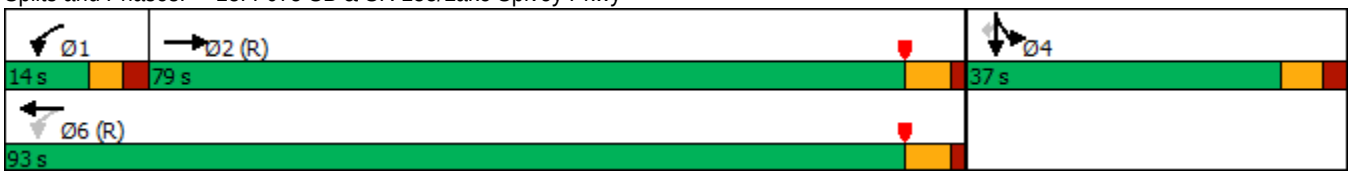
Notes

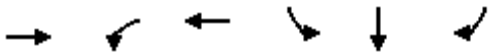
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2034	281	1694	449	0	604
Future Volume (vph)	2034	281	1694	449	0	604
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	73.1	87.1	87.1	30.5	30.5	30.5
Actuated g/C Ratio	0.56	0.67	0.67	0.23	0.23	0.23
v/c Ratio	1.44	1.84	0.97	0.62	0.63	1.02
Control Delay	222.0	409.5	15.1	52.6	52.8	88.5
Queue Delay	0.0	0.0	42.4	1.9	2.0	0.0
Total Delay	222.0	409.5	57.5	54.6	54.7	88.5
LOS	F	F	E	D	D	F
Approach Delay	222.0		107.6		74.1	
Approach LOS	F		F		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay: 147.8	Intersection LOS: F
Intersection Capacity Utilization 109.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





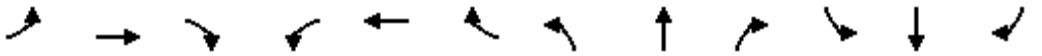
Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2327	309	1862	246	247	664
v/c Ratio	1.44	1.84	0.97	0.62	0.63	1.02
Control Delay	222.0	409.5	15.1	52.6	52.8	88.5
Queue Delay	0.0	0.0	42.4	1.9	2.0	0.0
Total Delay	222.0	409.5	57.5	54.6	54.7	88.5
Queue Length 50th (ft)	~1396	~340	884	196	197	~327
Queue Length 95th (ft)	m#1485	m#192	m2	295	296	#468
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1615	168	1919	394	394	653
Starvation Cap Reductn	0	0	258	0	0	0
Spillback Cap Reductn	0	0	419	57	57	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.44	1.84	1.24	0.73	0.73	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2034	84	281	1694	0	0	0	0	449	0	604
Future Volume (veh/h)	0	2034	84	281	1694	0	0	0	0	449	0	604
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2235	92	309	1862	0				493	0	664
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1602	65	176	1946	0				814	0	724
Arrive On Green	0.00	1.00	1.00	0.06	0.68	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	2893	115	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1134	1193	309	1862	0				493	0	664
Grp Sat Flow(s),veh/h/ln	0	1439	1494	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	66.0	8.1	77.2	0.0				16.1	0.0	26.6
Cycle Q Clear(g_c), s	0.0	0.0	66.0	8.1	77.2	0.0				16.1	0.0	26.6
Prop In Lane	0.00		0.08	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	818	849	176	1946	0				814	0	724
V/C Ratio(X)	0.00	1.39	1.41	1.76	0.96	0.00				0.61	0.00	0.92
Avail Cap(c_a), veh/h	0	818	849	176	1946	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.26	0.26	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.3	19.3	0.0				44.9	0.0	48.9
Incr Delay (d2), s/veh	0.0	175.7	184.3	343.2	1.7	0.0				1.3	0.0	16.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	39.9	43.5	22.4	22.0	0.0				7.1	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	175.7	184.3	385.4	21.0	0.0				46.2	0.0	65.0
LnGrp LOS	A	F	F	F	C	A				D	A	E
Approach Vol, veh/h		2327			2171						1157	
Approach Delay, s/veh		180.1			72.9						57.0	
Approach LOS		F			E						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.0	79.8		36.2		93.8
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	10.1	68.0		28.6		79.2
Green Ext Time (p_c), s	0.0	5.0		1.1		7.5

Intersection Summary		
HCM 6th Ctrl Delay		113.8
HCM 6th LOS		F

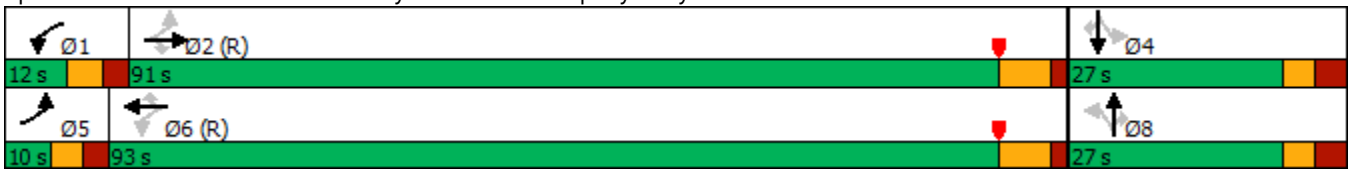
Notes

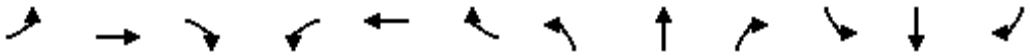
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1907	27	92	2092	47	22	3	79	91	9	63
Future Volume (vph)	32	1907	27	92	2092	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	94.7	88.6	88.6	100.6	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.73	0.68	0.68	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.28	0.96	0.03	0.67	0.98	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	10.9	15.3	0.1	30.9	22.7	0.8	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	43.7	0.0	0.0	24.9	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	10.9	59.1	0.1	30.9	47.6	0.8	51.4	47.7	16.0	69.3	48.6	10.5
LOS	B	E	A	C	D	A	D	D	B	E	D	B
Approach Delay		57.5			45.9			24.3			45.5	
Approach LOS		E			D			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 88.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





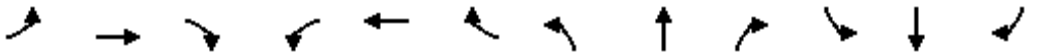
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	2096	30	101	2299	52	24	3	87	100	10	69
v/c Ratio	0.28	0.96	0.03	0.67	0.98	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	10.9	15.3	0.1	30.9	22.7	0.8	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	43.7	0.0	0.0	24.9	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	10.9	59.1	0.1	30.9	47.6	0.8	51.4	47.7	16.0	69.3	48.6	10.5
Queue Length 50th (ft)	4	254	0	29	~1120	0	18	2	5	81	8	0
Queue Length 95th (ft)	m6	m#1088	m0	m38	m#1191	m0	44	12	53	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	123	2177	1102	152	2339	1179	221	295	318	223	295	318
Starvation Cap Reductn	0	0	0	0	175	0	0	0	0	0	0	0
Spillback Cap Reductn	0	694	0	0	0	0	0	0	17	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	1.41	0.03	0.66	1.06	0.04	0.11	0.01	0.29	0.45	0.03	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1907	27	92	2092	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1907	27	92	2092	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	2096	30	101	2299	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	205	2354	1150	247	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	2096	30	101	2299	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	2354	1150	247	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.17	0.89	0.03	0.41	0.96	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	226	2354	1150	276	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.23	0.23	0.23	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	2.2	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.0	0.5	0.7	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	1.4	0.0	4.0	2.2	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		2161			2452			114			179	
Approach Delay, s/veh		1.4			2.2			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	6.0	* 84		* 21	4.4	* 86		* 21				
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8				
Green Ext Time (p_c), s	0.0	66.4		0.5	0.0	73.9		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		5.3	
HCM 6th LOS		A	

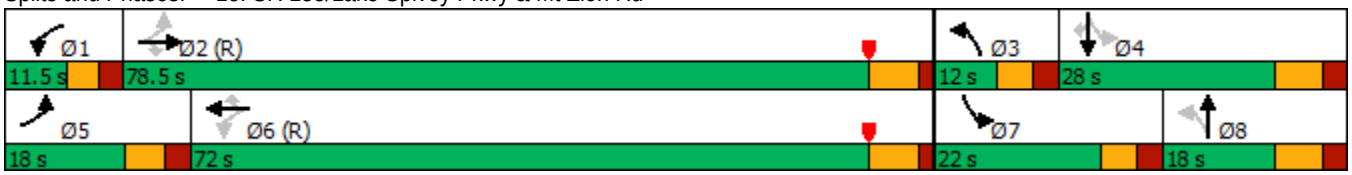
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	1671	84	31	1845	281	76	28	286	27	316
Future Volume (vph)	188	1671	84	31	1845	281	76	28	286	27	316
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	85.7	78.7	78.7	74.1	67.2	67.2	15.3	10.0	32.0	18.9	18.9
Actuated g/C Ratio	0.66	0.61	0.61	0.57	0.52	0.52	0.12	0.08	0.25	0.15	0.15
v/c Ratio	0.91	0.94	0.09	0.24	1.21	0.33	0.46	0.39	0.95	0.11	0.90
Control Delay	69.2	19.3	0.1	11.9	123.6	5.8	50.0	38.2	83.7	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	19.3	0.1	11.9	123.6	5.8	50.0	38.2	83.7	47.9	52.2
LOS	E	B	A	B	F	A	D	D	F	D	D
Approach Delay		23.3			106.6			44.9		66.4	
Approach LOS		C			F			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 66.4	Intersection LOS: E
Intersection Capacity Utilization 100.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





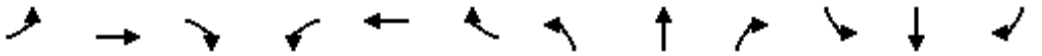
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	1816	91	34	2005	305	83	63	311	29	343
v/c Ratio	0.91	0.94	0.09	0.24	1.21	0.33	0.46	0.39	0.95	0.11	0.90
Control Delay	69.2	19.3	0.1	11.9	123.6	5.8	50.0	38.2	83.7	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	19.3	0.1	11.9	123.6	5.8	50.0	38.2	83.7	47.9	52.2
Queue Length 50th (ft)	115	~875	0	11	~1098	42	54	24	236	21	142
Queue Length 95th (ft)	m#169	#991	m0	m12	m#1132	m50	100	71	#351	51	#306
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	223	1932	1029	141	1651	930	179	174	328	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.94	0.09	0.24	1.21	0.33	0.46	0.36	0.95	0.10	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1671	84	31	1845	281	76	28	30	286	27	316
Future Volume (veh/h)	188	1671	84	31	1845	281	76	28	30	286	27	316
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1816	91	34	2005	305	83	30	33	311	29	343
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	261	1843	901	236	1697	829	222	68	75	340	301	255
Arrive On Green	0.14	1.00	1.00	0.07	1.00	1.00	0.05	0.08	0.08	0.12	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	1781	1870	1585
Grp Volume(v), veh/h	204	1816	91	34	2005	305	83	0	63	311	29	343
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1781	1870	1585
Q Serve(g_s), s	7.0	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	261	1843	901	236	1697	829	222	0	143	340	301	255
V/C Ratio(X)	0.78	0.99	0.10	0.14	1.18	0.37	0.37	0.00	0.44	0.91	0.10	1.35
Avail Cap(c_a), veh/h	294	1843	901	261	1697	829	222	0	143	340	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.20	0.20	0.20	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	0.0	0.0	12.6	0.0	0.0	51.6	0.0	56.6	49.6	46.5	54.6
Incr Delay (d2), s/veh	4.5	9.8	0.1	0.1	83.0	0.3	1.0	0.0	4.5	28.3	0.3	179.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	2.5	0.0	0.4	19.6	0.1	2.6	0.0	2.2	4.9	0.8	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	9.8	0.1	12.7	83.0	0.3	52.6	0.0	61.1	77.9	46.8	234.1
LnGrp LOS	B	A	A	B	F	A	D	A	E	E	D	F
Approach Vol, veh/h		2111			2344			146			683	
Approach Delay, s/veh		10.3			71.3			56.3			155.0	
Approach LOS		B			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	15.5	74.5	22.0	18.0
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.0	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.5	22.9	9.0	2.0	18.0	6.6
Green Ext Time (p_c), s	0.0	50.9	0.0	0.0	0.1	54.6	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	57.3
HCM 6th LOS	E

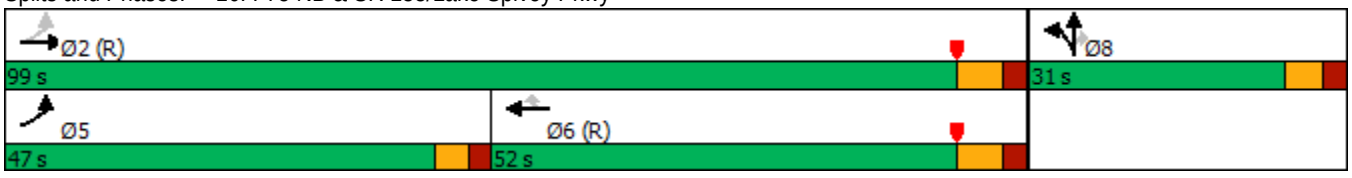
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	766	1835	1264	1051	0	243
Future Volume (vph)	766	1835	1264	1051	0	243
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	93.5	92.1	45.1	45.1	24.9	24.9
Actuated g/C Ratio	0.72	0.71	0.35	0.35	0.19	0.19
v/c Ratio	1.35	0.89	1.25	1.39	1.11	0.73
Control Delay	190.2	23.9	147.6	194.0	129.5	47.0
Queue Delay	0.0	32.6	0.0	0.0	0.0	0.0
Total Delay	190.2	56.5	147.6	194.0	129.5	47.0
LOS	F	E	F	F	F	D
Approach Delay		95.9	168.6		95.2	
Approach LOS		F	F		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 126.4	Intersection LOS: F
Intersection Capacity Utilization 141.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





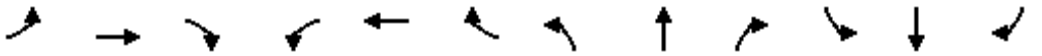
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	842	2016	1389	1155	376	267
v/c Ratio	1.35	0.89	1.25	1.39	1.11	0.73
Control Delay	190.2	23.9	147.6	194.0	129.5	47.0
Queue Delay	0.0	32.6	0.0	0.0	0.0	0.0
Total Delay	190.2	56.5	147.6	194.0	129.5	47.0
Queue Length 50th (ft)	~892	956	~760	~686	~362	152
Queue Length 95th (ft)	m#703	m586	m#611	m#511	#561	254
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	623	2263	1108	833	339	367
Starvation Cap Reductn	0	375	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.35	1.07	1.25	1.39	1.11	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	766	1835	0	0	1264	1051	342	0	243	0	0	0
Future Volume (veh/h)	766	1835	0	0	1264	1051	342	0	243	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	842	2016	0	0	1389	0	376	0	267			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	624	2298	0	0	1125		341	0	304			
Arrive On Green	0.32	0.71	0.00	0.00	0.69	0.00	0.19	0.00	0.19			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	842	2016	0	0	1389	0	376	0	267			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	62.2	0.0	0.0	45.1	0.0	24.9	0.0	21.3			
Cycle Q Clear(g_c), s	41.5	62.2	0.0	0.0	45.1	0.0	24.9	0.0	21.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	624	2298	0	0	1125		341	0	304			
V/C Ratio(X)	1.35	0.88	0.00	0.00	1.23		1.10	0.00	0.88			
Avail Cap(c_a), veh/h	624	2298	0	0	1125		341	0	304			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.7	14.6	0.0	0.0	19.9	0.0	52.6	0.0	51.1			
Incr Delay (d2), s/veh	158.2	0.5	0.0	0.0	106.2	0.0	79.0	0.0	23.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	46.5	18.7	0.0	0.0	23.8	0.0	18.1	0.0	10.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.9	15.1	0.0	0.0	126.1	0.0	131.6	0.0	74.6			
LnGrp LOS	F	B	A	A	F		F	A	E			
Approach Vol, veh/h		2858			1389	A		643				
Approach Delay, s/veh		68.7			126.1			107.9				
Approach LOS		E			F			F				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		99.0			47.0	52.0		31.0				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		64.2			43.5	47.1		26.9				
Green Ext Time (p_c), s		25.2			0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			90.1									
HCM 6th LOS			F									

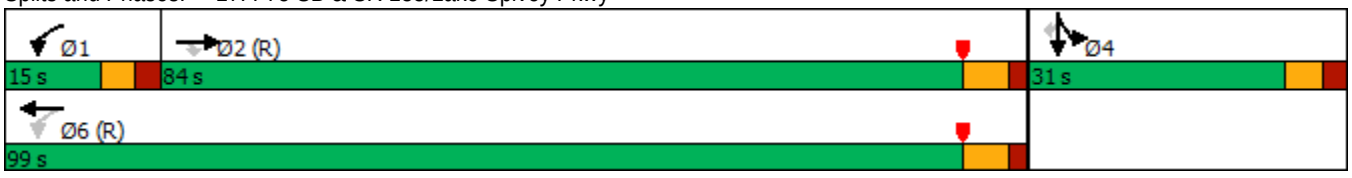
Notes

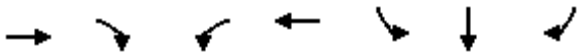
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1833	364	132	1419	787	0	299
Future Volume (vph)	1833	364	132	1419	787	0	299
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	77.9	77.9	93.2	92.7	24.8	24.8	24.8
Actuated g/C Ratio	0.60	0.60	0.72	0.71	0.19	0.19	0.19
v/c Ratio	1.06	0.36	0.82	0.69	1.37	1.37	0.91
Control Delay	47.9	0.6	51.1	3.7	223.3	223.3	69.8
Queue Delay	0.0	0.0	0.0	0.9	5.6	5.6	0.0
Total Delay	47.9	0.6	51.1	4.6	228.9	228.9	69.8
LOS	D	A	D	A	F	F	E
Approach Delay	40.1			8.5		185.1	
Approach LOS	D			A		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 62.5	Intersection LOS: E
Intersection Capacity Utilization 141.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





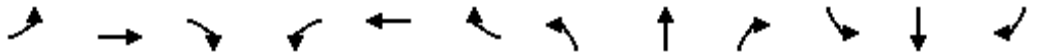
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2037	404	147	1577	437	437	332
v/c Ratio	1.06	0.36	0.82	0.69	1.37	1.37	0.91
Control Delay	47.9	0.6	51.1	3.7	223.3	223.3	69.8
Queue Delay	0.0	0.0	0.0	0.9	5.6	5.6	0.0
Total Delay	47.9	0.6	51.1	4.6	228.9	228.9	69.8
Queue Length 50th (ft)	~977	0	66	590	~509	~509	219
Queue Length 95th (ft)	m275	m0	m43	m0	#729	#729	#400
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1915	1110	182	2278	320	320	363
Starvation Cap Reductn	0	0	0	395	0	0	0
Spillback Cap Reductn	0	0	0	0	111	111	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.36	0.81	0.84	2.09	2.09	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1833	364	132	1419	0	0	0	0	787	0	299
Future Volume (veh/h)	0	1833	364	132	1419	0	0	0	0	787	0	299
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2037	404	147	1577	0				874	0	332
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2019	987	224	2313	0				680	0	302
Arrive On Green	0.00	1.00	1.00	0.05	0.71	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	2037	404	147	1577	0				874	0	332
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.7	35.3	0.0				24.8	0.0	24.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.7	35.3	0.0				24.8	0.0	24.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2019	987	224	2313	0				680	0	302
V/C Ratio(X)	0.00	1.01	0.41	0.66	0.68	0.00				1.29	0.00	1.10
Avail Cap(c_a), veh/h	0	2019	987	268	2313	0				680	0	302
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	9.7	10.4	0.0				52.6	0.0	52.6
Incr Delay (d2), s/veh	0.0	8.3	0.1	0.4	0.1	0.0				139.7	0.0	80.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	0.0	1.3	10.5	0.0				23.8	0.0	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.3	0.1	10.1	10.6	0.0				192.3	0.0	133.2
LnGrp LOS	A	F	A	B	B	A				F	A	F
Approach Vol, veh/h		2441			1724						1206	
Approach Delay, s/veh		6.9			10.5						176.0	
Approach LOS		A			B						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.8	87.2		31.0		99.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.7	2.0		26.8		37.3
Green Ext Time (p_c), s	0.1	65.4		0.0		35.1

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

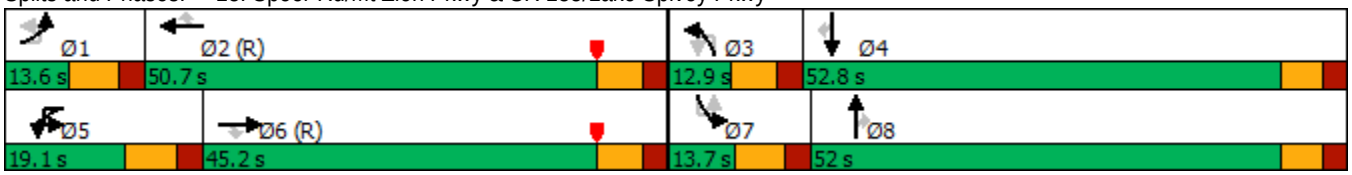
User approved volume balancing among the lanes for turning movement.

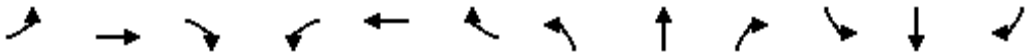
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	1104	82	285	1141	164	78	216	807	177	92	74
Future Volume (vph)	89	1104	82	285	1141	164	78	216	807	177	92	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	6.1	38.1	38.1	11.6	43.6	43.6	6.0	45.4	45.4	6.3	46.2	46.2
Actuated g/C Ratio	0.05	0.29	0.29	0.09	0.34	0.34	0.05	0.35	0.35	0.05	0.36	0.36
v/c Ratio	0.61	1.33	0.16	1.02	1.17	0.28	0.54	0.19	1.36	1.17	0.08	0.12
Control Delay	69.8	188.1	3.7	120.7	115.1	4.6	73.8	30.0	200.2	176.7	28.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.8	188.1	3.7	120.7	115.1	4.6	73.8	30.0	200.2	176.7	28.1	0.4
LOS	E	F	A	F	F	A	E	C	F	F	C	A
Approach Delay		168.0			104.7			157.9			99.0	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.36	
Intersection Signal Delay: 136.6	Intersection LOS: F
Intersection Capacity Utilization 117.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





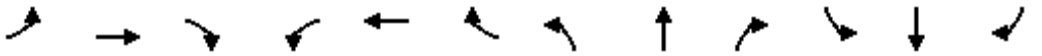
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	1213	90	313	1254	180	86	237	887	195	101	81
v/c Ratio	0.61	1.33	0.16	1.02	1.17	0.28	0.54	0.19	1.36	1.17	0.08	0.12
Control Delay	69.8	188.1	3.7	120.7	115.1	4.6	73.8	30.0	200.2	176.7	28.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.8	188.1	3.7	120.7	115.1	4.6	73.8	30.0	200.2	176.7	28.1	0.4
Queue Length 50th (ft)	42	~715	6	~148	~652	1	37	73	~896	~101	29	0
Queue Length 95th (ft)	m59	#855	m12	m#235	m#791	m39	65	105	#1152	#181	50	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	161	912	570	306	1071	650	158	1235	653	166	1257	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	1.33	0.16	1.02	1.17	0.28	0.54	0.19	1.36	1.17	0.08	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1104	82	285	1141	164	78	216	807	177	92	74
Future Volume (veh/h)	89	1104	82	285	1141	164	78	216	807	177	92	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	1213	90	313	1254	180	86	237	887	195	101	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	155	926	465	308	1095	535	152	1241	554	167	1270	567
Arrive On Green	0.09	0.59	0.59	0.18	0.67	0.67	0.04	0.35	0.35	0.05	0.36	0.36
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	98	1213	90	313	1254	180	86	237	887	195	101	81
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.6	38.1	3.4	11.6	43.9	6.2	3.2	6.0	45.4	6.3	2.4	4.5
Cycle Q Clear(g_c), s	3.6	38.1	3.4	11.6	43.9	6.2	3.2	6.0	45.4	6.3	2.4	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	926	465	308	1095	535	152	1241	554	167	1270	567
V/C Ratio(X)	0.63	1.31	0.19	1.02	1.15	0.34	0.56	0.19	1.60	1.16	0.08	0.14
Avail Cap(c_a), veh/h	162	926	465	308	1095	535	159	1241	554	167	1270	567
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	26.9	19.7	53.4	21.1	15.0	60.9	29.5	42.3	61.8	27.6	28.3
Incr Delay (d2), s/veh	4.3	144.1	0.5	43.9	72.6	1.0	4.2	0.1	279.5	120.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	27.3	1.3	6.3	18.8	2.1	1.5	2.5	59.9	5.5	1.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	171.0	20.3	97.3	93.7	16.0	65.1	29.6	321.8	182.5	27.6	28.4
LnGrp LOS	E	F	C	F	F	B	E	C	F	F	C	C
Approach Vol, veh/h		1401			1747			1210			377	
Approach Delay, s/veh		153.7			86.3			246.3			107.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	51.0	12.6	53.1	19.1	45.2	13.7	52.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.6	45.9	5.2	6.5	13.6	40.1	8.3	47.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	148.9
HCM 6th LOS	F

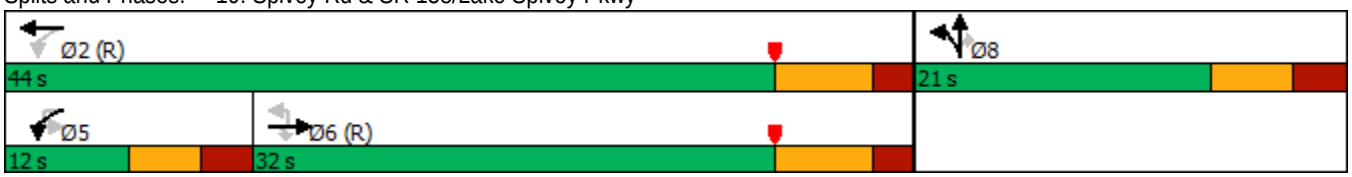
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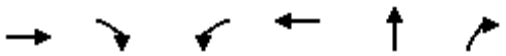
User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	867	16	136	1101	0	394
Future Volume (vph)	867	16	136	1101	0	394
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	32.0	32.0	12.0	44.0	21.0	21.0
Total Split (%)	49.2%	49.2%	18.5%	67.7%	32.3%	32.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	29.0	29.0	39.6	38.8	12.7	12.7
Actuated g/C Ratio	0.45	0.45	0.61	0.60	0.20	0.20
v/c Ratio	0.69	0.02	0.46	0.66	0.12	0.88
Control Delay	19.6	0.1	10.4	19.2	21.5	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	0.1	10.4	19.2	21.5	32.0
LOS	B	A	B	B	C	C
Approach Delay	19.3			18.2	31.1	
Approach LOS	B			B	C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 33 (51%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 72.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	963	18	151	1223	41	438
v/c Ratio	0.69	0.02	0.46	0.66	0.12	0.88
Control Delay	19.6	0.1	10.4	19.2	21.5	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	0.1	10.4	19.2	21.5	32.0
Queue Length 50th (ft)	172	0	26	566	13	71
Queue Length 95th (ft)	#245	0	m24	m468	35	#222
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1390	777	327	1859	385	532
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.02	0.46	0.66	0.11	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	0	867	16	136	1101	0	37	0	394	0	0
Future Volume (veh/h)	0	0	867	16	136	1101	0	37	0	394	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		0	1663	1826	1826	1663	0	1856	1856	1856		
Adj Flow Rate, veh/h		0	963	18	151	1223	0	41	0	438		
Peak Hour Factor		0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %		0	16	5	5	16	0	3	3	3		
Cap, veh/h		0	1244	609	332	1808	0	389	0	346		
Arrive On Green		0.00	0.39	0.39	0.17	1.00	0.00	0.22	0.00	0.22		
Sat Flow, veh/h		0	3243	1547	1739	3243	0	1767	0	1572		
Grp Volume(v), veh/h		0	963	18	151	1223	0	41	0	438		
Grp Sat Flow(s),veh/h/ln		0	1580	1547	1739	1580	0	1767	0	1572		
Q Serve(g_s), s		0.0	17.3	0.5	3.0	0.0	0.0	1.2	0.0	14.3		
Cycle Q Clear(g_c), s		0.0	17.3	0.5	3.0	0.0	0.0	1.2	0.0	14.3		
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00		
Lane Grp Cap(c), veh/h		0	1244	609	332	1808	0	389	0	346		
V/C Ratio(X)		0.00	0.77	0.03	0.45	0.68	0.00	0.11	0.00	1.27		
Avail Cap(c_a), veh/h		0	1244	609	343	1808	0	389	0	346		
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)		0.00	1.00	1.00	0.09	0.09	0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh		0.0	17.2	12.1	11.1	0.0	0.0	20.2	0.0	25.4		
Incr Delay (d2), s/veh		0.0	4.7	0.1	0.1	0.2	0.0	0.1	0.0	140.8		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		0.0	5.9	0.1	0.8	0.0	0.0	0.5	0.0	18.4		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	21.9	12.2	11.2	0.2	0.0	20.4	0.0	166.1		
LnGrp LOS		A	C	B	B	A	A	C	A	F		
Approach Vol, veh/h			981			1374			479			
Approach Delay, s/veh			21.7			1.4			153.7			
Approach LOS			C			A			F			

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	44.0			11.6	32.4		21.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	37.2			6.0	25.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			5.0	19.3		16.3					
Green Ext Time (p_c), s	23.4			0.0	4.6		0.0					

Intersection Summary												
HCM 6th Ctrl Delay			34.2									
HCM 6th LOS			C									

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(I)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	1221

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	225	365	396	140	145	106
Future Vol, veh/h	225	365	396	140	145	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	369	598	649	230	238	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	879	0	-	0	2100	764
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	1336	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	764	-	-	-	~ 56	399
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	242	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	764	-	-	-	~ 16	399
Mov Cap-2 Maneuver	-	-	-	-	~ 16	-
Stage 1	-	-	-	-	~ 126	-
Stage 2	-	-	-	-	242	-

Approach	EB	WB	SB
HCM Control Delay, s	5.4	0	$ 6685.9
HCM LOS			F

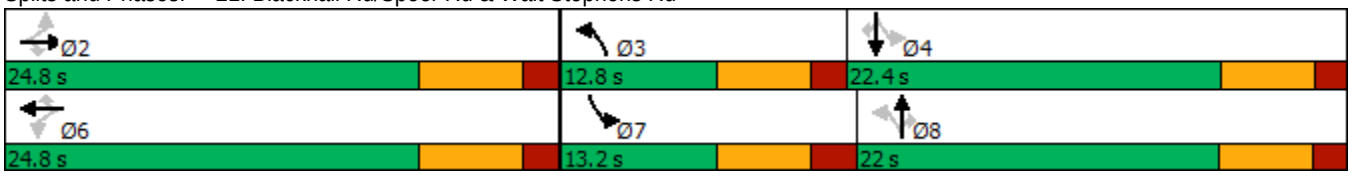
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	764	-	-	-	27
HCM Lane V/C Ratio	0.483	-	-	-	15.24
HCM Control Delay (s)	14	0	-		$ 6685.9
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	2.7	-	-	-	51.1

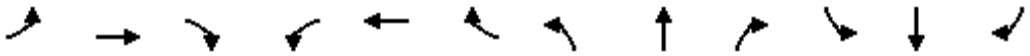
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	359	59	139	370	661	52	399	121	249	84	16
Future Volume (vph)	34	359	59	139	370	661	52	399	121	249	84	16
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	18.5	18.5	18.5	18.5	18.5	18.5	22.9	15.9	15.9	25.2	21.5	21.5
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.27	0.27	0.42	0.36	0.36
v/c Ratio	0.20	0.70	0.11	0.79	0.73	0.96	0.11	0.91	0.25	0.84	0.14	0.03
Control Delay	18.6	26.2	0.4	50.6	27.9	37.0	9.0	46.8	3.7	37.3	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	26.2	0.4	50.6	27.9	37.0	9.0	46.8	3.7	37.3	16.4	0.1
LOS	B	C	A	D	C	D	A	D	A	D	B	A
Approach Delay		22.3			35.7			34.2			30.6	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 59.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 32.3	Intersection LOS: C
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd

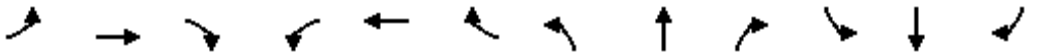




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	403	66	156	416	743	58	448	136	280	94	18
v/c Ratio	0.20	0.70	0.11	0.79	0.73	0.96	0.11	0.91	0.25	0.84	0.14	0.03
Control Delay	18.6	26.2	0.4	50.6	27.9	37.0	9.0	46.8	3.7	37.3	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	26.2	0.4	50.6	27.9	37.0	9.0	46.8	3.7	37.3	16.4	0.1
Queue Length 50th (ft)	10	127	0	51	132	122	10	155	0	58	26	0
Queue Length 95th (ft)	31	#218	0	#141	#247	#342	26	#302	25	#174	56	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	190	577	598	198	571	771	552	506	549	335	672	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.70	0.11	0.79	0.73	0.96	0.11	0.89	0.25	0.84	0.14	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	359	59	139	370	661	52	399	121	249	84	16
Future Volume (veh/h)	34	359	59	139	370	661	52	399	121	249	84	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	403	66	156	416	743	58	448	136	280	94	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	174	579	491	231	575	487	591	499	423	359	595	504
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.27	0.27	0.12	0.32	0.32
Sat Flow, veh/h	485	1870	1585	917	1856	1572	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	38	403	66	156	416	743	58	448	136	280	94	18
Grp Sat Flow(s),veh/h/ln	485	1870	1585	917	1856	1572	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.5	11.3	1.8	7.2	11.9	18.5	1.3	13.8	4.1	6.9	2.2	0.5
Cycle Q Clear(g_c), s	16.4	11.3	1.8	18.5	11.9	18.5	1.3	13.8	4.1	6.9	2.2	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	579	491	231	575	487	591	499	423	359	595	504
V/C Ratio(X)	0.22	0.70	0.13	0.68	0.72	1.53	0.10	0.90	0.32	0.78	0.16	0.04
Avail Cap(c_a), veh/h	174	579	491	231	575	487	671	507	430	359	595	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	18.1	14.9	27.3	18.3	20.6	13.5	21.1	17.6	15.5	14.6	14.0
Incr Delay (d2), s/veh	1.3	4.6	0.3	10.0	5.5	246.8	0.1	18.5	0.4	10.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.8	0.6	2.7	5.1	39.0	0.5	7.6	1.3	3.2	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	22.8	15.1	37.3	23.9	267.5	13.6	39.6	18.0	26.0	14.7	14.1
LnGrp LOS	C	C	B	D	C	F	B	D	B	C	B	B
Approach Vol, veh/h		507			1315			642			392	
Approach Delay, s/veh		22.1			163.1			32.7			22.7	
Approach LOS		C			F			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	10.1	24.8		24.8	13.2	21.7				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		18.4	3.3	4.2		20.5	8.9	15.8				
Green Ext Time (p_c), s		0.0	0.0	0.3		0.0	0.0	0.1				

Intersection Summary	
HCM 6th Ctrl Delay	89.5
HCM 6th LOS	F

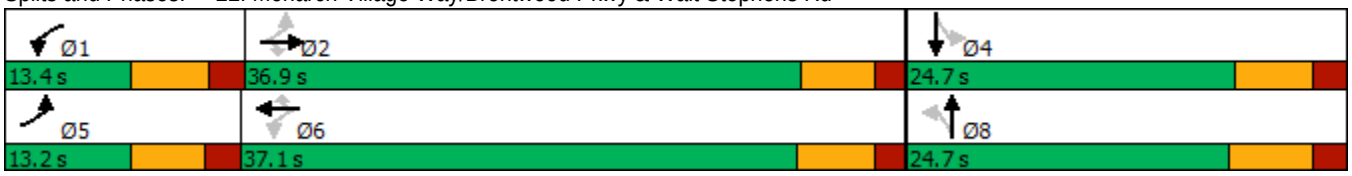
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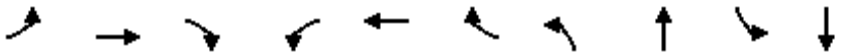
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	26	556	68	102	834	52	187	29	78	36
Future Volume (vph)	26	556	68	102	834	52	187	29	78	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	36.9	36.9	13.4	37.1	37.1	24.7	24.7	24.7	24.7
Total Split (%)	17.6%	49.2%	49.2%	17.9%	49.5%	49.5%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	35.9	30.8	30.8	38.2	35.9	35.9	15.6	15.6	15.9	15.9
Actuated g/C Ratio	0.52	0.44	0.44	0.55	0.52	0.52	0.22	0.22	0.23	0.23
v/c Ratio	0.11	0.76	0.10	0.33	0.99	0.07	0.77	0.40	0.33	0.32
Control Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
LOS	A	C	A	A	D	A	D	A	C	B
Approach Delay		22.8			43.0			28.8		16.9
Approach LOS		C			D			C		B

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 69.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 32.3	Intersection LOS: C
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd

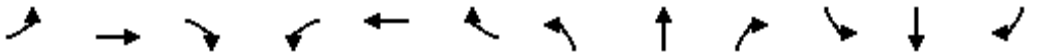




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	632	77	116	948	59	213	194	89	149
v/c Ratio	0.11	0.76	0.10	0.33	0.99	0.07	0.77	0.40	0.33	0.32
Control Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
Queue Length 50th (ft)	5	252	0	22	336	0	91	12	34	15
Queue Length 95th (ft)	15	#418	3	42	#752	0	#184	59	72	56
Internal Link Dist (ft)		2243			4110			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	273	847	798	349	955	881	324	549	312	523
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.75	0.10	0.33	0.99	0.07	0.66	0.35	0.29	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	556	68	102	834	52	187	29	142	78	36	95
Future Volume (veh/h)	26	556	68	102	834	52	187	29	142	78	36	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	632	77	116	948	59	212	33	161	89	41	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	179	730	618	315	811	687	322	70	341	281	115	303
Arrive On Green	0.04	0.39	0.39	0.09	0.44	0.44	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1767	1856	1572	1239	277	1350	1189	455	1199
Grp Volume(v), veh/h	30	632	77	116	948	59	212	0	194	89	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	1856	1572	1239	0	1627	1189	0	1654
Q Serve(g_s), s	0.7	22.2	2.2	2.6	31.2	1.6	12.1	0.0	7.2	4.9	0.0	5.3
Cycle Q Clear(g_c), s	0.7	22.2	2.2	2.6	31.2	1.6	17.4	0.0	7.2	12.1	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		0.72
Lane Grp Cap(c), veh/h	179	730	618	315	811	687	322	0	411	281	0	418
V/C Ratio(X)	0.17	0.87	0.12	0.37	1.17	0.09	0.66	0.00	0.47	0.32	0.00	0.36
Avail Cap(c_a), veh/h	276	813	689	332	811	687	322	0	411	286	0	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	20.0	13.9	14.5	20.1	11.7	29.0	0.0	22.6	27.8	0.0	21.9
Incr Delay (d2), s/veh	0.2	10.4	0.2	0.3	89.0	0.1	4.9	0.0	0.8	0.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	10.2	0.7	0.9	31.0	0.5	3.9	0.0	2.8	1.4	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	30.4	14.1	14.8	109.0	11.8	33.9	0.0	23.5	28.4	0.0	22.4
LnGrp LOS	B	C	B	B	F	B	C	A	C	C	A	C
Approach Vol, veh/h		739			1123			406			238	
Approach Delay, s/veh		28.2			94.2			28.9			24.7	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	33.9		24.7	9.3	37.3		24.7				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 31		* 18	7.0	* 31		18.0				
Max Q Clear Time (g_c+I1), s	4.6	24.2		14.1	2.7	33.2		19.4				
Green Ext Time (p_c), s	0.0	3.6		0.4	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		57.5	
HCM 6th LOS		E	

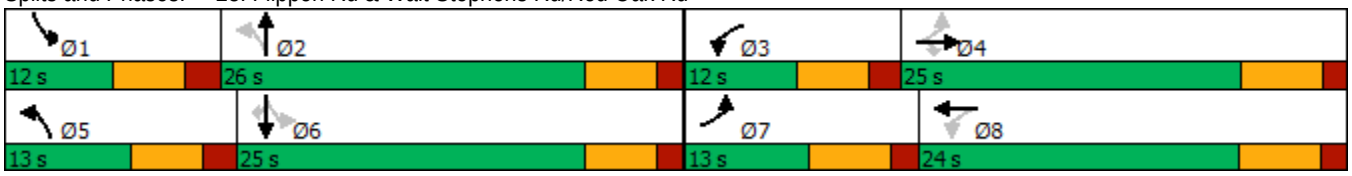
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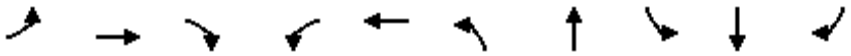
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	279	201	490	22	264	421	399	23	337	349
Future Volume (vph)	279	201	490	22	264	421	399	23	337	349
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	27.1	24.6	24.6	22.5	16.0	29.1	26.8	24.0	18.4	18.4
Actuated g/C Ratio	0.37	0.34	0.34	0.31	0.22	0.40	0.37	0.33	0.25	0.25
v/c Ratio	0.97	0.35	0.63	0.06	0.80	1.48	0.67	0.09	0.80	0.59
Control Delay	66.2	22.1	7.4	13.8	42.2	252.4	28.8	13.7	40.9	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	22.1	7.4	13.8	42.2	252.4	28.8	13.7	40.9	7.9
LOS	E	C	A	B	D	F	C	B	D	A
Approach Delay		27.4			40.3		141.2		23.8	
Approach LOS		C			D		F		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 72.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.48	
Intersection Signal Delay: 61.6	Intersection LOS: E
Intersection Capacity Utilization 91.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



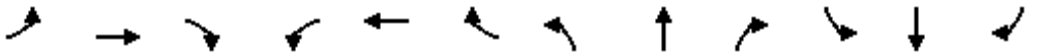


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	310	223	544	24	325	468	463	26	374	388
v/c Ratio	0.97	0.35	0.63	0.06	0.80	1.48	0.67	0.09	0.80	0.59
Control Delay	66.2	22.1	7.4	13.8	42.2	252.4	28.8	13.7	40.9	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	22.1	7.4	13.8	42.2	252.4	28.8	13.7	40.9	7.9
Queue Length 50th (ft)	100	67	13	6	137	~252	156	7	162	10
Queue Length 95th (ft)	#233	152	112	20	#252	#435	#381	20	#295	80
Internal Link Dist (ft)		2177			3175		1869		1397	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	321	632	865	408	456	317	689	289	491	680
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.35	0.63	0.06	0.71	1.48	0.67	0.09	0.76	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	201	490	22	264	29	421	399	18	23	337	349
Future Volume (veh/h)	279	201	490	22	264	29	421	399	18	23	337	349
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	310	223	544	24	293	32	468	443	20	26	374	388
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	308	516	437	280	342	37	331	590	27	260	495	420
Arrive On Green	0.10	0.28	0.28	0.03	0.21	0.21	0.10	0.33	0.33	0.03	0.27	0.27
Sat Flow, veh/h	1781	1870	1585	1767	1644	180	1781	1776	80	1753	1841	1560
Grp Volume(v), veh/h	310	223	544	24	0	325	468	0	463	26	374	388
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1823	1781	0	1856	1753	1841	1560
Q Serve(g_s), s	6.9	7.1	19.9	0.8	0.0	12.4	7.0	0.0	16.0	0.8	13.4	17.4
Cycle Q Clear(g_c), s	6.9	7.1	19.9	0.8	0.0	12.4	7.0	0.0	16.0	0.8	13.4	17.4
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	308	516	437	280	0	379	331	0	617	260	495	420
V/C Ratio(X)	1.01	0.43	1.24	0.09	0.00	0.86	1.41	0.00	0.75	0.10	0.75	0.92
Avail Cap(c_a), veh/h	308	516	437	376	0	453	331	0	617	347	495	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	21.5	26.1	21.2	0.0	27.5	23.3	0.0	21.4	18.7	24.2	25.6
Incr Delay (d2), s/veh	52.6	0.6	127.7	0.1	0.0	13.2	203.0	0.0	6.1	0.2	7.7	26.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	2.8	22.4	0.3	0.0	6.4	20.7	0.0	7.1	0.3	6.3	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.8	22.0	153.8	21.3	0.0	40.7	226.2	0.0	27.5	18.9	31.9	52.5
LnGrp LOS	F	C	F	C	A	D	F	A	C	B	C	D
Approach Vol, veh/h		1077			349			931			788	
Approach Delay, s/veh		104.6			39.4			127.4			41.6	
Approach LOS		F			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	29.6	8.1	26.0	13.0	25.0	13.0	21.1
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.8	18.0	2.8	21.9	9.0	19.4	8.9	14.4
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	88.3
HCM 6th LOS	F

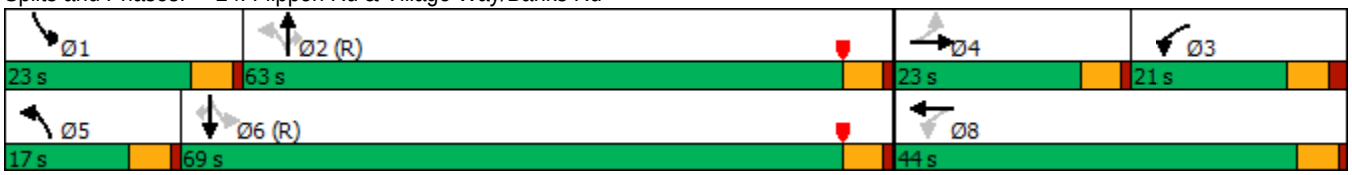
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	19	4	132	2	1	538	163	257	595	7
Future Volume (vph)	19	4	132	2	1	538	163	257	595	7
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	5.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	11.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	23.0	23.0	21.0	44.0	17.0	63.0	63.0	23.0	69.0	69.0
Total Split (%)	17.7%	17.7%	16.2%	33.8%	13.1%	48.5%	48.5%	17.7%	53.1%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.5	21.9	22.9	83.7	73.7	73.7	97.1	94.1	94.1
Actuated g/C Ratio		0.12	0.17	0.18	0.64	0.57	0.57	0.75	0.72	0.72
v/c Ratio		0.44	0.55	0.53	0.00	0.57	0.19	0.51	0.50	0.01
Control Delay		60.3	56.4	9.1	7.0	22.5	4.6	9.1	11.3	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		60.3	56.4	9.1	7.0	22.5	4.6	9.1	11.3	0.0
LOS		E	E	A	A	C	A	A	B	A
Approach Delay		60.3		26.0		18.3			10.6	
Approach LOS		E		C		B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

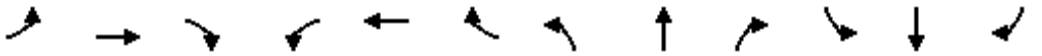
Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	148	266	1	604	183	289	669	8
v/c Ratio	0.44	0.55	0.53	0.00	0.57	0.19	0.51	0.50	0.01
Control Delay	60.3	56.4	9.1	7.0	22.5	4.6	9.1	11.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	56.4	9.1	7.0	22.5	4.6	9.1	11.3	0.0
Queue Length 50th (ft)	20	111	1	0	335	12	73	221	0
Queue Length 95th (ft)	56	172	69	2	493	52	113	462	0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	88	345	665	588	1066	954	573	1348	1199
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.43	0.40	0.00	0.57	0.19	0.50	0.50	0.01

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	4	8	132	2	235	1	538	163	257	595	7
Future Volume (veh/h)	19	4	8	132	2	235	1	538	163	257	595	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1900	1900	1900	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	21	4	9	148	2	264	1	604	183	289	669	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	3	0	0	0	1	3	0	2	0
Cap, veh/h	45	13	5	271	2	311	449	1138	949	490	1272	1095
Arrive On Green	0.08	0.08	0.08	0.07	0.19	0.19	0.00	0.60	0.60	0.08	0.68	0.68
Sat Flow, veh/h	0	155	56	1767	12	1600	1810	1885	1572	1810	1870	1610
Grp Volume(v), veh/h	34	0	0	148	0	266	1	604	183	289	669	8
Grp Sat Flow(s),veh/h/ln	210	0	0	1767	0	1612	1810	1885	1572	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	20.7	0.0	24.3	4.1	7.5	23.2	0.2
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.0	0.0	20.7	0.0	24.3	4.1	7.5	23.2	0.2
Prop In Lane	0.62		0.26	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	0	0	271	0	313	449	1138	949	490	1272	1095
V/C Ratio(X)	0.55	0.00	0.00	0.55	0.00	0.85	0.00	0.53	0.19	0.59	0.53	0.01
Avail Cap(c_a), veh/h	136	0	0	344	0	484	611	1138	949	597	1272	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	60.0	0.0	0.0	53.3	0.0	50.5	10.8	15.0	4.2	11.6	10.4	6.7
Incr Delay (d2), s/veh	15.2	0.0	0.0	1.7	0.0	13.9	0.0	1.8	0.5	1.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	4.6	0.0	9.5	0.0	10.1	2.3	2.7	8.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	0.0	0.0	55.0	0.0	64.5	10.8	16.8	4.6	12.7	11.4	6.7
LnGrp LOS	E	A	A	D	A	E	B	B	A	B	B	A
Approach Vol, veh/h		34			414			788			966	
Approach Delay, s/veh		75.2			61.1			14.0			11.7	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	83.4	15.6	15.6	5.4	93.4		31.2				
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0		* 6				
Max Green Setting (Gmax), s	18.0	58.0	15.0	18.0	12.0	64.0		* 39				
Max Q Clear Time (g_c+I1), s	9.5	26.3	2.0	12.6	2.0	25.2		22.7				
Green Ext Time (p_c), s	0.8	9.9	0.3	0.1	0.0	10.1		2.5				

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	395	286	51	59	29
Future Vol, veh/h	29	395	286	51	59	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	459	333	59	69	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	392	0	-	0	890	363
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	527	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1167	-	-	-	313	682
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	592	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1167	-	-	-	301	682
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	592	-

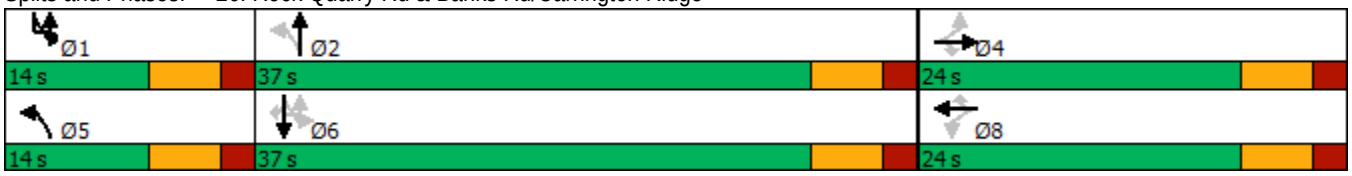
Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1167	-	-	-	369
HCM Lane V/C Ratio	0.029	-	-	-	0.277
HCM Control Delay (s)	8.2	0	-	-	18.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	117	11	324	57	23	11	196	498	3	750	77
Future Volume (vph)	117	11	324	57	23	11	196	498	3	750	77
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	37.0	14.0	37.0	37.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	18.7%	49.3%	18.7%	49.3%	49.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)		12.7	12.7		12.7	12.7	38.4	37.0	31.2	25.0	25.0
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.60	0.58	0.49	0.39	0.39
v/c Ratio		0.56	0.65		0.34	0.03	0.52	0.29	0.01	0.61	0.12
Control Delay		34.0	12.5		27.3	0.1	10.9	8.6	6.3	18.1	1.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		34.0	12.5		27.3	0.1	10.9	8.6	6.3	18.1	1.5
LOS		C	B		C	A	B	A	A	B	A
Approach Delay		18.6			24.0			9.2		16.5	
Approach LOS		B			C			A		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 64.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

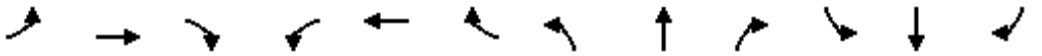
Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge





Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	141	356	88	12	215	567	3	824	85
v/c Ratio	0.56	0.65	0.34	0.03	0.52	0.29	0.01	0.61	0.12
Control Delay	34.0	12.5	27.3	0.1	10.9	8.6	6.3	18.1	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	12.5	27.3	0.1	10.9	8.6	6.3	18.1	1.5
Queue Length 50th (ft)	51	24	31	0	32	45	1	128	0
Queue Length 95th (ft)	109	102	72	0	71	126	4	205	11
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	362	663	378	557	423	1999	556	1704	835
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.54	0.23	0.02	0.51	0.28	0.01	0.48	0.10

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	11	324	57	23	11	196	498	18	3	750	77
Future Volume (veh/h)	117	11	324	57	23	11	196	498	18	3	750	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1900	1870	1826	1826	1900	1826	1841
Adj Flow Rate, veh/h	129	12	356	63	25	12	215	547	20	3	824	85
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	1	0	0	0	2	5	5	0	5	4
Cap, veh/h	104	5	435	93	23	438	382	1539	56	414	1235	555
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.10	0.45	0.45	0.00	0.36	0.36
Sat Flow, veh/h	0	20	1598	0	84	1610	1781	3413	125	1810	3469	1560
Grp Volume(v), veh/h	141	0	356	88	0	12	215	278	289	3	824	85
Grp Sat Flow(s),veh/h/ln	20	0	1598	84	0	1610	1781	1735	1803	1810	1735	1560
Q Serve(g_s), s	0.0	0.0	13.8	0.0	0.0	0.4	4.7	6.9	6.9	0.1	13.3	2.5
Cycle Q Clear(g_c), s	18.0	0.0	13.8	18.0	0.0	0.4	4.7	6.9	6.9	0.1	13.3	2.5
Prop In Lane	0.91		1.00	0.72		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	110	0	435	116	0	438	382	782	813	414	1235	555
V/C Ratio(X)	1.29	0.00	0.82	0.76	0.00	0.03	0.56	0.36	0.36	0.01	0.67	0.15
Avail Cap(c_a), veh/h	110	0	435	116	0	438	420	813	845	624	1626	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	22.5	28.5	0.0	17.7	12.7	11.9	11.9	13.5	18.0	14.5
Incr Delay (d2), s/veh	181.5	0.0	11.7	24.5	0.0	0.0	1.1	0.6	0.6	0.0	1.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	6.3	2.2	0.0	0.1	1.5	2.3	2.4	0.0	4.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.7	0.0	34.3	53.0	0.0	17.7	13.7	12.5	12.4	13.5	19.4	14.8
LnGrp LOS	F	A	C	D	A	B	B	B	B	B	B	B
Approach Vol, veh/h		497			100			782			912	
Approach Delay, s/veh		85.2			48.8			12.8			18.9	
Approach LOS		F			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	35.8		24.0	12.6	29.5		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	31.0		18.0	8.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	8.9		20.0	6.7	15.3		20.0				
Green Ext Time (p_c), s	0.0	5.9		0.0	0.1	8.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.5	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	139	1	41	2	0	1	41	561	2	1	800	183
Future Vol, veh/h	139	1	41	2	0	1	41	561	2	1	800	183
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	0	7	0	0	0	5	5	0	0	5	5
Mvmt Flow	149	1	44	2	0	1	44	603	2	1	860	197

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1252	1555	430	1124	-	302	1057	0	0	605	0	0
Stage 1	862	862	-	691	-	-	-	-	-	-	-	-
Stage 2	390	693	-	433	-	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.5	7.04	7.5	-	6.9	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	6.64	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4	3.37	3.5	-	3.3	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 124	114	560	163	0	700	637	-	-	983	-	-
Stage 1	306	375	-	406	0	-	-	-	-	-	-	-
Stage 2	592	448	-	577	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 117	106	560	141	-	700	637	-	-	983	-	-
Mov Cap-2 Maneuver	~ 117	106	-	141	-	-	-	-	-	-	-	-
Stage 1	285	375	-	378	-	-	-	-	-	-	-	-
Stage 2	550	417	-	530	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	10.2	0.8	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	637	-	-	560	700	983	-	-
HCM Lane V/C Ratio	0.069	-	-	0.079	0.002	0.001	-	-
HCM Control Delay (s)	11.1	-	-	12	10.2	8.7	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	171	7	5	208	4	7	74	10	5	81	102
Future Vol, veh/h	69	171	7	5	208	4	7	74	10	5	81	102
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	2	0	0	8	0	0	2	14	0	2	0
Mvmt Flow	87	216	9	6	263	5	9	94	13	6	103	129
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.3	12.2	10.3	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	28%	2%	3%
Vol Thru, %	81%	69%	96%	43%
Vol Right, %	11%	3%	2%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	91	247	217	188
LT Vol	7	69	5	5
Through Vol	74	171	208	81
RT Vol	10	7	4	102
Lane Flow Rate	115	313	275	238
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.473	0.412	0.356
Departure Headway (Hd)	5.885	5.447	5.4	5.385
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	607	660	665	666
Service Time	3.949	3.496	3.45	3.439
HCM Lane V/C Ratio	0.189	0.474	0.414	0.357
HCM Control Delay	10.3	13.3	12.2	11.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	2.5	2	1.6

Intersection	
Intersection Delay, s/veh	22.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	203	62	15	448	60	84	8	21	18	5	53
Future Vol, veh/h	37	203	62	15	448	60	84	8	21	18	5	53
Peak Hour Factor	0.90	0.90	0.90	0.94	0.90	0.94	0.90	0.94	0.94	0.94	0.94	0.90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	41	226	69	16	498	64	93	9	22	19	5	59
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	12.9	32.4	11.4	10.4
HCM LOS	B	D	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	74%	100%	0%	100%	0%	24%
Vol Thru, %	7%	0%	77%	0%	88%	7%
Vol Right, %	19%	0%	23%	0%	12%	70%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	37	265	15	508	76
LT Vol	84	37	0	15	0	18
Through Vol	8	0	203	0	448	5
RT Vol	21	0	62	0	60	53
Lane Flow Rate	124	41	294	16	562	83
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.224	0.073	0.467	0.027	0.862	0.145
Departure Headway (Hd)	6.494	6.388	5.714	6.148	5.524	6.254
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	550	560	630	582	657	570
Service Time	4.565	4.137	3.463	3.888	3.264	4.331
HCM Lane V/C Ratio	0.225	0.073	0.467	0.027	0.855	0.146
HCM Control Delay	11.4	9.6	13.4	9.1	33.1	10.4
HCM Lane LOS	B	A	B	A	D	B
HCM 95th-tile Q	0.9	0.2	2.5	0.1	9.9	0.5

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	0	22	21	0	85	8	720	8	38	558	24
Future Vol, veh/h	38	0	22	21	0	85	8	720	8	38	558	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	4	4	0
Mvmt Flow	42	0	24	23	0	94	9	800	9	42	620	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1574	1531	620	1548	1549	800	647	0	0	809	0	0
Stage 1	704	704	-	818	818	-	-	-	-	-	-	-
Stage 2	870	827	-	730	731	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	90	118	492	93	115	385	948	-	-	808	-	-
Stage 1	431	443	-	370	393	-	-	-	-	-	-	-
Stage 2	349	389	-	414	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	111	492	84	108	385	948	-	-	808	-	-
Mov Cap-2 Maneuver	65	111	-	84	108	-	-	-	-	-	-	-
Stage 1	427	420	-	367	389	-	-	-	-	-	-	-
Stage 2	261	385	-	373	408	-	-	-	-	-	-	-

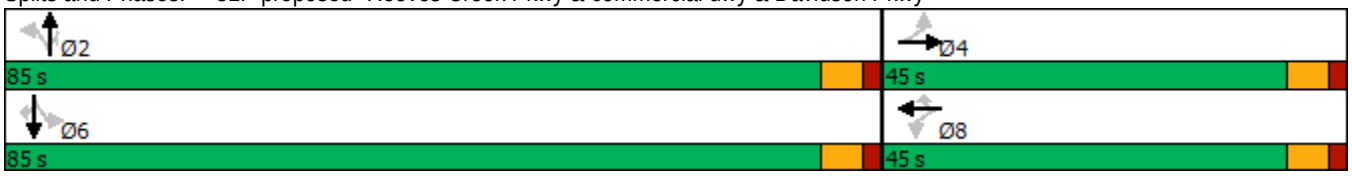
Approach	EB	WB	NB	SB
HCM Control Delay, s	104.1	37.3	0.1	0.6
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	948	-	-	95	225	808	-	-
HCM Lane V/C Ratio	0.009	-	-	0.702	0.523	0.052	-	-
HCM Control Delay (s)	8.8	-	-	104.1	37.3	9.7	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	3.5	2.7	0.2	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	70	28	217	53	316	18	455	84	191	807	133
Future Volume (vph)	70	28	217	53	316	18	455	84	191	807	133
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8			2			6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	4	4	8	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	85.0	85.0	85.0	85.0	85.0	85.0
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%	65.4%	65.4%	65.4%	65.4%	65.4%	65.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	30.7	30.7		30.7	30.7	79.3	79.3	79.3	79.3	79.3	79.3
Actuated g/C Ratio	0.25	0.25		0.25	0.25	0.65	0.65	0.65	0.65	0.65	0.65
v/c Ratio	0.47	0.09		0.85	0.52	0.09	0.41	0.09	0.42	0.73	0.14
Control Delay	48.2	27.3		65.1	6.5	11.3	12.5	2.2	14.8	20.1	2.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	27.3		65.1	6.5	11.3	12.5	2.2	14.8	20.1	2.7
LOS	D	C		E	A	B	B	A	B	C	A
Approach Delay		41.0		33.5			10.9			17.2	
Approach LOS		D		C			B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 122.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

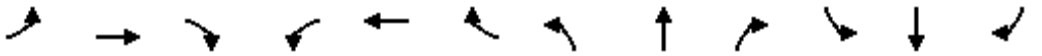
Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	41	300	351	20	506	93	212	897	148
v/c Ratio	0.47	0.09	0.85	0.52	0.09	0.41	0.09	0.42	0.73	0.14
Control Delay	48.2	27.3	65.1	6.5	11.3	12.5	2.2	14.8	20.1	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	27.3	65.1	6.5	11.3	12.5	2.2	14.8	20.1	2.7
Queue Length 50th (ft)	52	19	225	0	6	181	0	76	446	5
Queue Length 95th (ft)	104	47	336	71	20	296	21	155	718	33
Internal Link Dist (ft)		239	814			604			1282	
Turn Bay Length (ft)										
Base Capacity (vph)	211	593	450	756	220	1234	1081	509	1234	1094
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.07	0.67	0.46	0.09	0.41	0.09	0.42	0.73	0.14

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	28	9	217	53	316	18	455	84	191	807	133
Future Volume (veh/h)	70	28	9	217	53	316	18	455	84	191	807	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	31	10	241	59	351	20	506	93	212	897	148
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	148	406	131	379	80	475	201	1163	985	448	1163	985
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	991	1376	444	1113	272	1610	548	1900	1610	833	1900	1610
Grp Volume(v), veh/h	78	0	41	300	0	351	20	506	93	212	897	148
Grp Sat Flow(s),veh/h/ln	991	0	1820	1386	0	1610	548	1900	1610	833	1900	1610
Q Serve(g_s), s	10.0	0.0	2.1	24.0	0.0	25.4	3.6	18.2	3.1	23.3	44.8	5.1
Cycle Q Clear(g_c), s	36.0	0.0	2.1	26.0	0.0	25.4	48.4	18.2	3.1	41.5	44.8	5.1
Prop In Lane	1.00		0.24	0.80		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	0	537	459	0	475	201	1163	985	448	1163	985
V/C Ratio(X)	0.53	0.00	0.08	0.65	0.00	0.74	0.10	0.44	0.09	0.47	0.77	0.15
Avail Cap(c_a), veh/h	156	0	550	470	0	487	201	1163	985	448	1163	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	0.0	32.8	42.2	0.0	41.0	36.2	13.2	10.3	24.2	18.4	10.7
Incr Delay (d2), s/veh	2.9	0.0	0.1	3.1	0.0	5.8	1.0	1.2	0.2	3.6	5.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.0	9.0	0.0	10.7	0.5	7.5	1.1	4.8	19.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	0.0	32.9	45.3	0.0	46.8	37.2	14.4	10.5	27.8	23.4	11.0
LnGrp LOS	E	A	C	D	A	D	D	B	B	C	C	B
Approach Vol, veh/h		119			651			619			1257	
Approach Delay, s/veh		51.0			46.1			14.6			22.7	
Approach LOS		D			D			B			C	

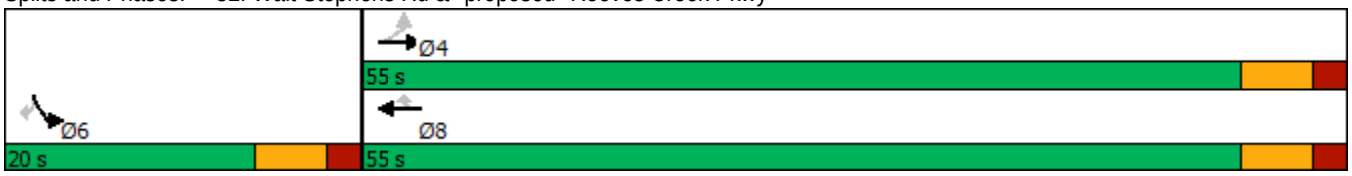
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.0		44.1		85.0		44.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		79.0		39.0		79.0		39.0				
Max Q Clear Time (g_c+I1), s		50.4		38.0		46.8		28.0				
Green Ext Time (p_c), s		3.6		0.0		9.8		2.3				

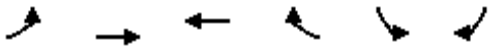
Intersection Summary												
HCM 6th Ctrl Delay			27.8									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	653	738	298	121	89
Future Volume (vph)	193	653	738	298	121	89
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	55.0	55.0	55.0	55.0	20.0	20.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	34.7	34.7	34.7	34.7	14.6	14.6
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.24	0.24
v/c Ratio	1.06	0.68	0.77	0.32	0.31	0.22
Control Delay	100.1	12.5	15.2	1.5	26.5	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.1	12.5	15.2	1.5	26.5	7.9
LOS	F	B	B	A	C	A
Approach Delay		32.4	11.2		18.6	
Approach LOS		C	B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 61.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 32: Walt Stephens Rd & *proposed* Reeves Creek Pkwy



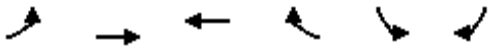


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	214	726	820	331	134	99
v/c Ratio	1.06	0.68	0.77	0.32	0.31	0.22
Control Delay	100.1	12.5	15.2	1.5	26.5	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.1	12.5	15.2	1.5	26.5	7.9
Queue Length 50th (ft)	~78	163	201	0	43	0
Queue Length 95th (ft)	#223	254	314	24	105	37
Internal Link Dist (ft)		4110	2177		821	
Turn Bay Length (ft)						
Base Capacity (vph)	290	1534	1534	1367	426	457
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.47	0.53	0.24	0.31	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	193	653	738	298	121	89
Future Volume (veh/h)	193	653	738	298	121	89
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	214	726	820	331	134	99
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	290	1241	1241	1052	338	301
Arrive On Green	0.65	0.65	0.65	0.65	0.19	0.19
Sat Flow, veh/h	496	1900	1900	1610	1810	1610
Grp Volume(v), veh/h	214	726	820	331	134	99
Grp Sat Flow(s),veh/h/ln	496	1900	1900	1610	1810	1610
Q Serve(g_s), s	29.3	16.1	19.7	6.7	4.9	4.0
Cycle Q Clear(g_c), s	49.0	16.1	19.7	6.7	4.9	4.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	290	1241	1241	1052	338	301
V/C Ratio(X)	0.74	0.58	0.66	0.31	0.40	0.33
Avail Cap(c_a), veh/h	290	1241	1241	1052	338	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	7.3	7.9	5.7	26.8	26.4
Incr Delay (d2), s/veh	9.6	0.7	1.3	0.2	3.5	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	4.5	5.7	1.6	2.3	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.9	8.0	9.2	5.8	30.3	29.3
LnGrp LOS	C	A	A	A	C	C
Approach Vol, veh/h		940	1151		233	
Approach Delay, s/veh		13.9	8.3		29.9	
Approach LOS		B	A		C	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	55.0	20.0	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0
Max Green Setting (Gmax), s	49.0	14.0	49.0
Max Q Clear Time (g_c+I1), s	51.0	6.9	21.7
Green Ext Time (p_c), s	0.0	0.4	7.4

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	48	37	0	4	18	676	15	2	582	23
Future Vol, veh/h	61	0	48	37	0	4	18	676	15	2	582	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	0	53	41	0	4	20	751	17	2	647	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1453	1459	647	1482	1468	751	673	0	0	768	0	0
Stage 1	651	651	-	791	791	-	-	-	-	-	-	-
Stage 2	802	808	-	691	677	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	109	131	475	104	129	414	927	-	-	855	-	-
Stage 1	461	468	-	386	404	-	-	-	-	-	-	-
Stage 2	381	397	-	438	455	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	128	475	90	126	414	927	-	-	855	-	-
Mov Cap-2 Maneuver	106	128	-	90	126	-	-	-	-	-	-	-
Stage 1	451	466	-	378	395	-	-	-	-	-	-	-
Stage 2	369	388	-	387	453	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	74.9	71.4	0.2	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	927	-	-	161	97	855	-	-
HCM Lane V/C Ratio	0.022	-	-	0.752	0.47	0.003	-	-
HCM Control Delay (s)	9	-	-	74.9	71.4	9.2	0	-
HCM Lane LOS	A	-	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.7	2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1281	925	328	715	551	491
Future Volume (vph)	1281	925	328	715	551	491
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.1	59.1	88.7	87.5	48.1	48.1
Actuated g/C Ratio	0.39	0.39	0.59	0.58	0.32	0.32
v/c Ratio	1.21	1.03	1.32	0.44	1.29	0.86
Control Delay	144.3	46.8	206.2	18.4	188.4	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	144.3	46.8	206.2	18.4	188.4	34.8
LOS	F	D	F	B	F	C
Approach Delay	103.4			77.5	116.0	
Approach LOS	F			E	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 100.2	Intersection LOS: F
Intersection Capacity Utilization 101.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1392	1005	357	777	599	534
v/c Ratio	1.21	1.03	1.32	0.44	1.29	0.86
Control Delay	144.3	46.8	206.2	18.4	188.4	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	144.3	46.8	206.2	18.4	188.4	34.8
Queue Length 50th (ft)	~873	~561	~407	215	~745	238
Queue Length 95th (ft)	#1014	#826	#614	264	#983	#469
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1146	979	270	1784	463	621
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.21	1.03	1.32	0.44	1.29	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1281	925	328	715	551	491
Future Volume (veh/h)	1281	925	328	715	551	491
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1392	1005	357	777	599	534
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1156	516	279	1810	467	416
Arrive On Green	0.39	0.39	0.15	0.58	0.32	0.32
Sat Flow, veh/h	3011	1309	1555	3185	1457	1296
Grp Volume(v), veh/h	1392	1005	357	777	599	534
Grp Sat Flow(s),veh/h/ln	1467	1309	1555	1552	1457	1296
Q Serve(g_s), s	59.1	59.1	22.3	20.9	48.1	48.1
Cycle Q Clear(g_c), s	59.1	59.1	22.3	20.9	48.1	48.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1156	516	279	1810	467	416
V/C Ratio(X)	1.20	1.95	1.28	0.43	1.28	1.28
Avail Cap(c_a), veh/h	1156	516	279	1810	467	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	45.4	50.5	17.4	50.9	51.0
Incr Delay (d2), s/veh	100.2	434.1	150.0	0.7	142.7	145.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.3	80.3	22.1	7.3	35.2	45.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	145.7	479.6	200.5	18.1	193.6	196.3
LnGrp LOS	F	F	F	B	F	F
Approach Vol, veh/h	2397			1134	1133	
Approach Delay, s/veh	285.7			75.5	194.9	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.8		55.2	28.4	66.4
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		22.9		50.1	24.3	61.1
Green Ext Time (p_c), s		12.8		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	212.5
HCM 6th LOS	F

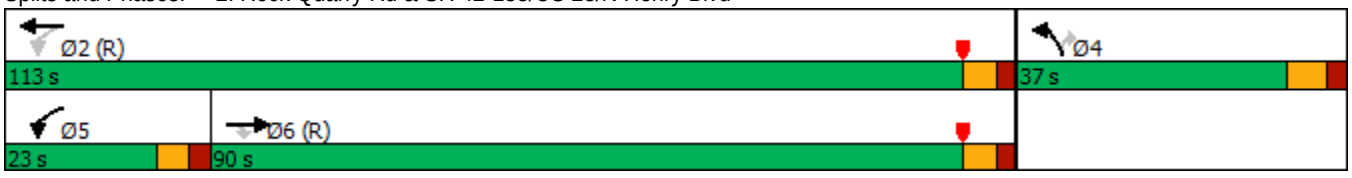
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1963	350	372	1190	379	531
Future Volume (vph)	1963	350	372	1190	379	531
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	83.9	83.9	107.0	106.9	30.1	30.1
Actuated g/C Ratio	0.56	0.56	0.71	0.71	0.20	0.20
v/c Ratio	1.25	0.35	1.56	0.60	1.11	1.18
Control Delay	142.6	4.0	303.3	12.3	135.1	133.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	142.6	4.0	303.3	12.3	135.1	133.9
LOS	F	A	F	B	F	F
Approach Delay	121.6			81.6	134.4	
Approach LOS	F			F	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.56	
Intersection Signal Delay: 111.0	Intersection LOS: F
Intersection Capacity Utilization 111.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2045	365	388	1240	395	553
v/c Ratio	1.25	0.35	1.56	0.60	1.11	1.18
Control Delay	142.6	4.0	303.3	12.3	135.1	133.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	142.6	4.0	303.3	12.3	135.1	133.9
Queue Length 50th (ft)	~1306	30	~486	293	~441	~490
Queue Length 95th (ft)	#1441	m44	#700	352	#654	#728
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1641	1046	249	2074	355	469
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.25	0.35	1.56	0.60	1.11	1.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1963	350	372	1190	379	531
Future Volume (veh/h)	1963	350	372	1190	379	531
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	2045	365	388	1240	395	553
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1657	887	250	2091	357	318
Arrive On Green	0.74	0.74	0.11	0.71	0.20	0.20
Sat Flow, veh/h	3040	1585	1781	3011	1781	1585
Grp Volume(v), veh/h	2045	365	388	1240	395	553
Grp Sat Flow(s),veh/h/ln	1481	1585	1781	1467	1781	1585
Q Serve(g_s), s	83.9	12.8	17.0	31.5	30.1	30.1
Cycle Q Clear(g_c), s	83.9	12.8	17.0	31.5	30.1	30.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1657	887	250	2091	357	318
V/C Ratio(X)	1.23	0.41	1.55	0.59	1.11	1.74
Avail Cap(c_a), veh/h	1657	887	250	2091	357	318
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	10.1	55.8	10.7	60.0	59.9
Incr Delay (d2), s/veh	107.1	0.4	267.5	1.2	79.0	345.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	45.8	3.8	27.6	9.4	21.3	54.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	126.3	10.5	323.4	12.0	138.9	405.2
LnGrp LOS	F	B	F	B	F	F
Approach Vol, veh/h	2410			1628	948	
Approach Delay, s/veh	108.8			86.2	294.2	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	23.0	90.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		33.5		32.1	19.0	85.9
Green Ext Time (p_c), s		36.9		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	136.6
HCM 6th LOS	F

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	2314	11	1542	29	18
Future Volume (vph)	2314	11	1542	29	18
Turn Type	NA	Perm	NA	Prot	Perm
Protected Phases	6		2	4	
Permitted Phases		2			4
Detector Phase	6	2	2	4	4
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0
Minimum Split (s)	18.4	18.4	18.4	11.0	11.0
Total Split (s)	136.0	136.0	136.0	14.0	14.0
Total Split (%)	90.7%	90.7%	90.7%	9.3%	9.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)	2.4	2.4	2.4	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	133.9	133.9	133.9	7.2	7.2
Actuated g/C Ratio	0.89	0.89	0.89	0.05	0.05
v/c Ratio	0.91	0.13	0.60	0.35	0.19
Control Delay	20.3	4.5	6.1	80.3	30.7
Queue Delay	45.8	0.0	0.4	4.9	0.0
Total Delay	66.1	4.5	6.6	85.2	30.7
LOS	E	A	A	F	C
Approach Delay	66.1		6.5	64.8	
Approach LOS	E		A	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 90 (60%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 42.6	Intersection LOS: D
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: S Lee St & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2389	11	1573	30	18
v/c Ratio	0.91	0.13	0.60	0.35	0.19
Control Delay	20.3	4.5	6.1	80.3	30.7
Queue Delay	45.8	0.0	0.4	4.9	0.0
Total Delay	66.1	4.5	6.6	85.2	30.7
Queue Length 50th (ft)	1100	2	386	29	0
Queue Length 95th (ft)	m757	m2	m412	66	28
Internal Link Dist (ft)	643		981	352	
Turn Bay Length (ft)		100		175	
Base Capacity (vph)	2616	83	2620	94	101
Starvation Cap Reductn	694	0	0	0	0
Spillback Cap Reductn	0	0	514	31	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.24	0.13	0.75	0.48	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2314	27	11	1542	29	18
Future Volume (veh/h)	2314	27	11	1542	29	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1559	1870	1559	1870	1870
Adj Flow Rate, veh/h	2361	28	11	1573	30	18
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	23	23	2	23	2	2
Cap, veh/h	2664	32	178	2632	51	46
Arrive On Green	1.00	1.00	1.00	1.00	0.03	0.03
Sat Flow, veh/h	3076	35	147	3040	1781	1585
Grp Volume(v), veh/h	1164	1225	11	1573	30	18
Grp Sat Flow(s),veh/h/ln	1481	1553	147	1481	1781	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.5	1.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	2.5	1.7
Prop In Lane		0.02	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1316	1380	178	2632	51	46
V/C Ratio(X)	0.88	0.89	0.06	0.60	0.58	0.39
Avail Cap(c_a), veh/h	1316	1380	178	2632	95	85
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.62	0.62	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	72.0	71.6
Incr Delay (d2), s/veh	0.9	0.9	0.4	0.6	10.1	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.0	0.2	1.3	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.9	0.4	0.6	82.1	77.0
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	2389			1584	48	
Approach Delay, s/veh	0.9			0.6	80.2	
Approach LOS	A			A	F	

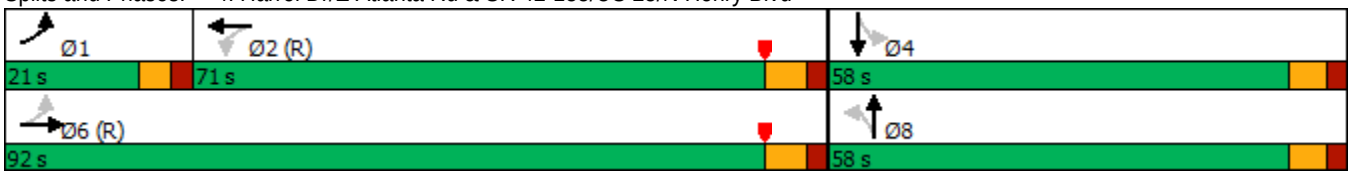
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		139.7		10.3		139.7
Change Period (Y+Rc), s		6.4		6.0		6.4
Max Green Setting (Gmax), s		129.6		8.0		129.6
Max Q Clear Time (g_c+I1), s		2.0		4.5		2.0
Green Ext Time (p_c), s		60.4		0.0		116.9

Intersection Summary	
HCM 6th Ctrl Delay	1.7
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	432	1853	18	1234	30	41	395	5
Future Volume (vph)	432	1853	18	1234	30	41	395	5
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	1	6	2	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	19.1	19.1	19.1	14.7	14.7	14.7	14.7
Total Split (s)	21.0	92.0	71.0	71.0	58.0	58.0	58.0	58.0
Total Split (%)	14.0%	61.3%	47.3%	47.3%	38.7%	38.7%	38.7%	38.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.2	4.2	4.2	4.2
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1		6.7		6.7
Lead/Lag	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	86.0	84.9	63.9	63.9		51.3		51.3
Actuated g/C Ratio	0.57	0.57	0.43	0.43		0.34		0.34
v/c Ratio	2.27	1.16	0.39	1.34		0.31		1.61
Control Delay	599.5	91.9	58.7	190.7		35.9		315.0
Queue Delay	0.0	1.0	0.0	0.0		0.1		0.9
Total Delay	599.5	92.8	58.7	190.7		36.0		315.9
LOS	F	F	E	F		D		F
Approach Delay		188.0		189.2		36.0		315.9
Approach LOS		F		F		D		F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 146 (97%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.27	
Intersection Signal Delay: 201.9	Intersection LOS: F
Intersection Capacity Utilization 139.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





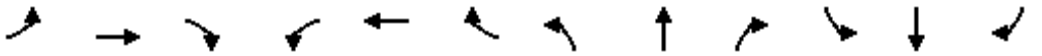
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	450	1946	19	1639	158	708
v/c Ratio	2.27	1.16	0.39	1.34	0.31	1.61
Control Delay	599.5	91.9	58.7	190.7	35.9	315.0
Queue Delay	0.0	1.0	0.0	0.0	0.1	0.9
Total Delay	599.5	92.8	58.7	190.7	36.0	315.9
Queue Length 50th (ft)	~670	~1177	13	~1072	106	~978
Queue Length 95th (ft)	m#390	m310	m26	#1218	170	#1229
Internal Link Dist (ft)		3939		643	194	367
Turn Bay Length (ft)	150		100			
Base Capacity (vph)	198	1673	49	1226	515	441
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	400	0	0	46	42
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.27	1.53	0.39	1.34	0.34	1.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	432	1853	15	18	1234	340	30	41	81	395	5	280
Future Volume (veh/h)	432	1853	15	18	1234	340	30	41	81	395	5	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	450	1930	16	19	1285	354	31	43	84	411	5	292
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	205	1720	14	48	983	265	121	172	300	299	3	186
Arrive On Green	0.10	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1570	3040	25	227	2307	622	270	502	877	764	9	543
Grp Volume(v), veh/h	450	948	998	19	815	824	158	0	0	708	0	0
Grp Sat Flow(s),veh/h/ln	1570	1495	1569	227	1481	1447	1649	0	0	1317	0	0
Q Serve(g_s), s	15.0	84.9	84.9	0.0	63.9	63.9	0.0	0.0	0.0	41.1	0.0	0.0
Cycle Q Clear(g_c), s	15.0	84.9	84.9	63.9	63.9	63.9	10.2	0.0	0.0	51.3	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.43	0.20		0.53	0.58		0.41
Lane Grp Cap(c), veh/h	205	846	888	48	631	617	593	0	0	488	0	0
V/C Ratio(X)	2.20	1.12	1.12	0.40	1.29	1.34	0.27	0.00	0.00	1.45	0.00	0.00
Avail Cap(c_a), veh/h	205	846	888	48	631	617	593	0	0	488	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.77	0.77	0.77	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.6	32.5	32.6	64.5	32.5	32.5	35.8	0.0	0.0	52.3	0.0	0.0
Incr Delay (d2), s/veh	539.5	55.8	57.2	17.8	140.3	159.9	0.2	0.0	0.0	213.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.5	42.3	44.7	0.9	44.8	47.2	4.4	0.0	0.0	47.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	589.0	88.4	89.7	82.2	172.8	192.4	36.0	0.0	0.0	266.1	0.0	0.0
LnGrp LOS	F	F	F	F	F	F	D	A	A	F	A	A
Approach Vol, veh/h		2396			1658			158			708	
Approach Delay, s/veh		183.0			181.5			36.0			266.1	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	21.0	71.0		58.0		92.0		58.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1		6.7				
Max Green Setting (Gmax), s	15.0	63.9		51.3		84.9		51.3				
Max Q Clear Time (g_c+I1), s	17.0	65.9		53.3		86.9		12.2				
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0		1.1				

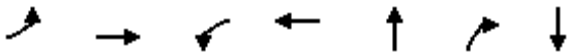
Intersection Summary												
HCM 6th Ctrl Delay			189.7									
HCM 6th LOS			F									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	2180	334	1372	282	62	347	15	60
Future Volume (vph)	30	2180	334	1372	282	62	347	15	60
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6	5	2		8			4
Permitted Phases	6		2		8		8	4	
Detector Phase	1	6	5	2	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.0	6.7		7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.6	94.3	114.0	106.2		22.6	22.6		22.6
Actuated g/C Ratio	0.68	0.63	0.76	0.71		0.15	0.15		0.15
v/c Ratio	0.12	1.53	1.66	0.68		2.01	1.07		1.72
Control Delay	5.9	264.4	331.4	8.1		503.1	108.1		412.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.9	264.4	331.4	8.1		503.1	108.1		412.1
LOS	A	F	F	A		F	F		F
Approach Delay		261.5		70.6		304.8			412.1
Approach LOS		F		E		F			F

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.01	
Intersection Signal Delay: 207.2	Intersection LOS: F
Intersection Capacity Utilization 136.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





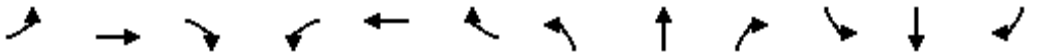
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	31	2713	341	1421	351	354	110
v/c Ratio	0.12	1.53	1.66	0.68	2.01	1.07	1.72
Control Delay	5.9	264.4	331.4	8.1	503.1	108.1	412.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	264.4	331.4	8.1	503.1	108.1	412.1
Queue Length 50th (ft)	7	~1953	~438	223	~534	~283	~147
Queue Length 95th (ft)	15	#2068	m#288	m156	#739	#491	#283
Internal Link Dist (ft)		4582		3939	720		305
Turn Bay Length (ft)	135		205			25	
Base Capacity (vph)	259	1779	205	2090	175	332	64
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	1.53	1.66	0.68	2.01	1.07	1.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2180	479	334	1372	21	282	62	347	15	60	33
Future Volume (veh/h)	30	2180	479	334	1372	21	282	62	347	15	60	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	2224	489	341	1400	21	288	63	354	15	61	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	258	1500	318	204	2078	31	105	13	239	27	81	36
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2386	506	1795	3016	45	404	88	1585	0	537	240
Grp Volume(v), veh/h	31	1322	1391	341	694	727	351	0	354	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1453	1438	1795	1495	1566	492	0	1585	778	0	0
Q Serve(g_s), s	0.9	94.3	94.3	13.0	40.4	40.5	0.0	0.0	22.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	94.3	94.3	13.0	40.4	40.5	22.6	0.0	22.6	22.6	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.03	0.82		1.00	0.14		0.31
Lane Grp Cap(c), veh/h	258	913	904	204	1030	1079	118	0	239	144	0	0
V/C Ratio(X)	0.12	1.45	1.54	1.67	0.67	0.67	2.98	0.00	1.48	0.76	0.00	0.00
Avail Cap(c_a), veh/h	282	913	904	204	1030	1079	118	0	239	144	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.5	27.9	27.9	57.4	13.5	13.5	67.9	0.0	63.7	58.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	207.3	247.9	305.6	0.3	0.3	912.6	0.0	238.2	24.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	81.9	91.3	24.8	12.8	13.5	34.4	0.0	24.9	4.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	235.2	275.7	363.0	13.9	13.9	980.5	0.0	301.9	82.4	0.0	0.0
LnGrp LOS	B	F	F	F	B	B	F	A	F	F	A	A
Approach Vol, veh/h		2744			1762			705			110	
Approach Delay, s/veh		253.2			81.4			639.7			82.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	110.0		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.9	42.5		24.6	15.0	96.3		24.6				
Green Ext Time (p_c), s	0.0	32.6		0.0	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			244.0									
HCM 6th LOS			F									

Intersection	
Int Delay, s/veh	31.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	4	346	25	5	35	318	1298	37	38	2271	130
Future Vol, veh/h	80	4	346	25	5	35	318	1298	37	38	2271	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	325	-	280	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	83	4	360	26	5	36	331	1352	39	40	2366	135

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3855	4567	1251	3279	4595	676	2501	0	0	1391	0	0
Stage 1	2514	2514	-	2014	2014	-	-	-	-	-	-	-
Stage 2	1341	2053	-	1265	2581	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 1	~ 1	~ 164	~ 4	~ 1	396	~ 179	-	-	488	-	-
Stage 1	~ 29	56	-	60	101	-	-	-	-	-	-	-
Stage 2	161	97	-	179	52	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 164	-	0	396	~ 179	-	-	488	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	~ 29	51	-	60	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	48	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			86.1	0.2
HCM LOS	-	-		

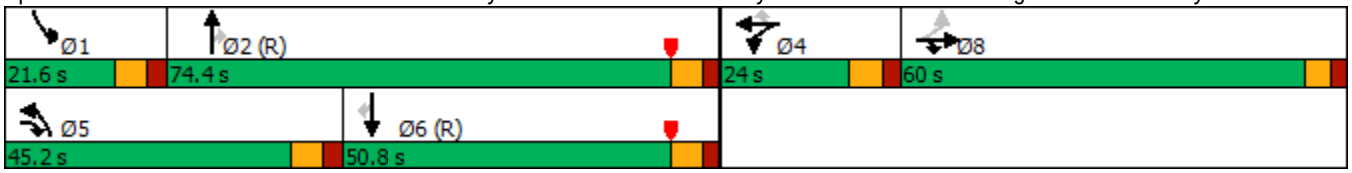
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 179	-	-	-	-	488	-	-
HCM Lane V/C Ratio	1.851	-	-	-	-	0.081	-	-
HCM Control Delay (s)	$ 447.5	-	-	-	-	13	-	-
HCM Lane LOS	F	-	-	-	-	B	-	-
HCM 95th %tile Q(veh)	24.2	-	-	-	-	0.3	-	-

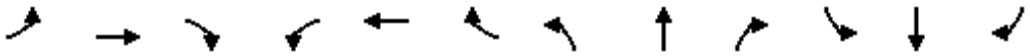
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	423	173	1500	125	172	126	871	504	71	70	829	210
Future Volume (vph)	423	173	1500	125	172	126	871	504	71	70	829	210
Turn Type	Perm	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	8 5	4	4		5	2		1	6	
Permitted Phases	8					4			2			6
Detector Phase	8	8	8 5	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	14.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	60.0	60.0		24.0	24.0	24.0	45.2	74.4	74.4	21.6	50.8	50.8
Total Split (%)	33.3%	33.3%		13.3%	13.3%	13.3%	25.1%	41.3%	41.3%	12.0%	28.2%	28.2%
Yellow Time (s)	3.5	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	54.0	54.0	99.2	17.0	17.0	17.0	38.4	68.7	68.7	13.5	43.9	43.9
Actuated g/C Ratio	0.30	0.30	0.55	0.09	0.09	0.09	0.21	0.38	0.38	0.08	0.24	0.24
v/c Ratio	1.23	0.32	1.17	0.78	1.02	0.47	1.42	0.48	0.11	0.55	1.21	0.45
Control Delay	149.9	41.5	124.5	108.3	150.3	13.6	246.3	44.1	2.4	95.9	161.6	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.9	41.5	124.5	108.3	150.3	13.6	246.3	44.1	2.4	95.9	161.6	9.0
LOS	F	D	F	F	F	B	F	D	A	F	F	A
Approach Delay		122.8			97.2			163.9			128.6	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 133.6	Intersection LOS: F
Intersection Capacity Utilization 102.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





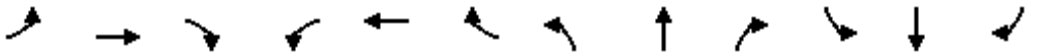
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	441	180	1563	130	179	131	907	525	74	73	864	219
v/c Ratio	1.23	0.32	1.17	0.78	1.02	0.47	1.42	0.48	0.11	0.55	1.21	0.45
Control Delay	149.9	41.5	124.5	108.3	150.3	13.6	246.3	44.1	2.4	95.9	161.6	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.9	41.5	124.5	108.3	150.3	13.6	246.3	44.1	2.4	95.9	161.6	9.0
Queue Length 50th (ft)	~646	167	~1241	153	~223	0	~740	250	0	84	~651	0
Queue Length 95th (ft)	m#595	m159	m#1142	#268	#394	57	#878	310	16	145	#790	77
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	360	558	1338	167	175	279	638	1102	667	144	715	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.32	1.17	0.78	1.02	0.47	1.42	0.48	0.11	0.51	1.21	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	423	173	1500	125	172	126	871	504	71	70	829	210
Future Volume (veh/h)	423	173	1500	125	172	126	871	504	71	70	829	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	441	180	1562	130	179	131	907	525	74	73	864	219
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.21	0.41	0.41	0.05	0.24	0.24
Sat Flow, veh/h	1781	1870	2458	1781	1870	1585	3045	2906	1585	1781	2962	1321
Grp Volume(v), veh/h	441	180	1562	130	179	131	907	525	74	73	864	219
Grp Sat Flow(s),veh/h/ln	1781	1870	1229	1781	1870	1585	1522	1453	1585	1781	1481	1321
Q Serve(g_s), s	43.7	16.1	54.0	12.8	17.0	14.7	38.4	23.6	5.2	7.3	43.9	27.0
Cycle Q Clear(g_c), s	43.7	16.1	54.0	12.8	17.0	14.7	38.4	23.6	5.2	7.3	43.9	27.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	561	1262	168	177	150	650	1179	643	91	722	322
V/C Ratio(X)	0.83	0.32	1.24	0.77	1.01	0.88	1.40	0.45	0.12	0.80	1.20	0.68
Avail Cap(c_a), veh/h	534	561	1262	168	177	150	650	1179	643	145	722	322
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.5	64.0	50.9	79.6	81.5	80.5	70.8	38.8	33.4	84.5	68.1	61.7
Incr Delay (d2), s/veh	1.0	0.0	107.7	20.2	71.2	40.1	187.6	1.2	0.4	34.6	101.4	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.2	8.2	41.9	6.9	11.8	7.6	31.7	8.6	2.1	4.2	26.5	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	64.1	158.6	99.8	152.7	120.5	258.4	40.0	33.7	119.1	169.4	72.7
LnGrp LOS	E	E	F	F	F	F	F	D	C	F	F	E
Approach Vol, veh/h		2183			440			1506			1156	
Approach Delay, s/veh		134.4			127.5			171.2			147.9	
Approach LOS		F			F			F			F	

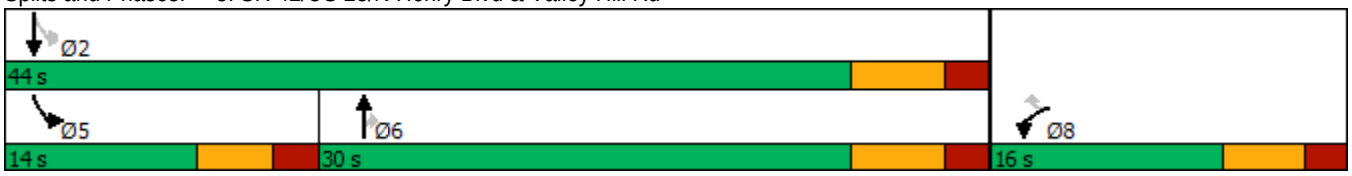
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.1	79.9		24.0	45.2	50.8		60.0				
Change Period (Y+Rc), s	6.9	6.9		7.0	6.8	6.9		6.0				
Max Green Setting (Gmax), s	14.7	67.5		17.0	38.4	43.9		54.0				
Max Q Clear Time (g_c+I1), s	9.3	25.6		19.0	40.4	45.9		56.0				
Green Ext Time (p_c), s	0.1	8.0		0.0	0.0	0.0		0.0				

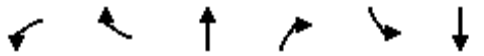
Intersection Summary												
HCM 6th Ctrl Delay			147.3									
HCM 6th LOS			F									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	195	135	763	208	317	1106
Future Volume (vph)	195	135	763	208	317	1106
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6	2	
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	12.0	12.0	8.0	12.0
Minimum Split (s)	16.0	16.0	18.2	18.2	14.0	18.2
Total Split (s)	16.0	16.0	30.0	30.0	14.0	44.0
Total Split (%)	26.7%	26.7%	50.0%	50.0%	23.3%	73.3%
Yellow Time (s)	3.6	3.6	4.2	4.2	3.4	4.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	6.2	6.2	5.4	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.3	10.3	22.2	22.2	37.0	36.2
Actuated g/C Ratio	0.18	0.18	0.38	0.38	0.63	0.62
v/c Ratio	0.64	0.35	0.70	0.29	0.69	0.62
Control Delay	34.2	7.8	19.1	3.3	14.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	7.8	19.1	3.3	14.6	8.6
LOS	C	A	B	A	B	A
Approach Delay	23.4		15.7			10.0
Approach LOS	C		B			A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 58.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 63.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SR 42/US 23/N Henry Blvd & Valley Hill Rd





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	199	138	779	212	323	1129
v/c Ratio	0.64	0.35	0.70	0.29	0.69	0.62
Control Delay	34.2	7.8	19.1	3.3	14.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	7.8	19.1	3.3	14.6	8.6
Queue Length 50th (ft)	68	0	117	0	42	108
Queue Length 95th (ft)	#146	40	173	34	#87	158
Internal Link Dist (ft)	1004		3554			843
Turn Bay Length (ft)		200		130	300	
Base Capacity (vph)	316	396	1200	772	469	1906
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.35	0.65	0.27	0.69	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	195	135	763	208	317	1106
Future Volume (veh/h)	195	135	763	208	317	1106
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1559	1870	1870	1559
Adj Flow Rate, veh/h	199	0	779	212	323	1129
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	23	2	2	23
Cap, veh/h	308		1095	586	470	1814
Arrive On Green	0.17	0.00	0.37	0.37	0.14	0.61
Sat Flow, veh/h	1781	1585	3040	1585	1781	3040
Grp Volume(v), veh/h	199	0	779	212	323	1129
Grp Sat Flow(s),veh/h/ln	1781	1585	1481	1585	1781	1481
Q Serve(g_s), s	5.7	0.0	12.4	5.4	5.5	13.1
Cycle Q Clear(g_c), s	5.7	0.0	12.4	5.4	5.5	13.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	308		1095	586	470	1814
V/C Ratio(X)	0.65		0.71	0.36	0.69	0.62
Avail Cap(c_a), veh/h	337		1282	686	492	2037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	14.8	12.6	10.3	6.7
Incr Delay (d2), s/veh	3.7	0.0	2.3	0.8	3.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	3.6	1.6	1.8	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.9	0.0	17.1	13.4	14.1	7.5
LnGrp LOS	C		B	B	B	A
Approach Vol, veh/h	199	A	991			1452
Approach Delay, s/veh	24.9		16.3			9.0
Approach LOS	C		B			A

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		39.9			13.3	26.5	15.1
Change Period (Y+Rc), s		6.2			5.4	6.2	5.6
Max Green Setting (Gmax), s		37.8			8.6	23.8	10.4
Max Q Clear Time (g_c+I1), s		15.1			7.5	14.4	7.7
Green Ext Time (p_c), s		13.7			0.1	5.9	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

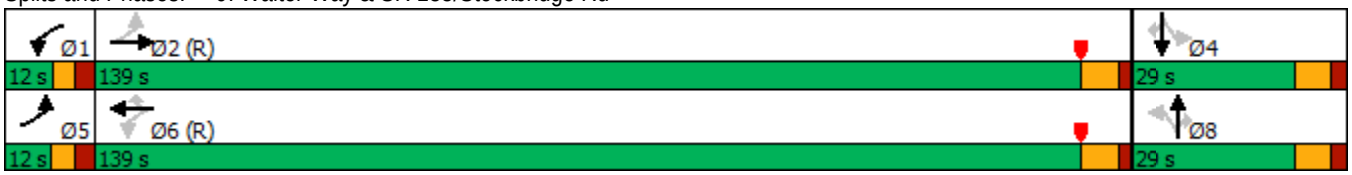
Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	2157	181	1276	25	107	5	249	10	7	24
Future Volume (vph)	23	2157	181	1276	25	107	5	249	10	7	24
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	12.0	139.0	12.0	139.0	139.0	29.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	6.7%	77.2%	6.7%	77.2%	77.2%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Yellow Time (s)	3.3	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	139.3	132.2	141.9	137.0	137.0		21.9	21.9		21.9	21.9
Actuated g/C Ratio	0.77	0.73	0.79	0.76	0.76		0.12	0.12		0.12	0.12
v/c Ratio	0.08	1.05	1.84	0.57	0.02		0.72	1.06		0.10	0.10
Control Delay	1.9	35.8	420.0	8.6	0.0		100.5	126.4		71.9	0.8
Queue Delay	0.0	22.1	0.0	0.6	0.0		0.0	0.0		0.0	0.0
Total Delay	1.9	57.9	420.0	9.3	0.0		100.5	126.4		71.9	0.8
LOS	A	E	F	A	A		F	F		E	A
Approach Delay		57.3		59.4			118.4			30.6	
Approach LOS		E		E			F			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 171 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay: 63.1	Intersection LOS: E
Intersection Capacity Utilization 101.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





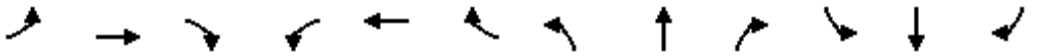
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	2360	191	1343	26	118	262	18	25
v/c Ratio	0.08	1.05	1.84	0.57	0.02	0.72	1.06	0.10	0.10
Control Delay	1.9	35.8	420.0	8.6	0.0	100.5	126.4	71.9	0.8
Queue Delay	0.0	22.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	57.9	420.0	9.3	0.0	100.5	126.4	71.9	0.8
Queue Length 50th (ft)	2	~1615	~295	664	0	137	~267	19	0
Queue Length 95th (ft)	m2	m#1561	m#261	m536	m0	#235	#467	48	0
Internal Link Dist (ft)		492		895		2216		57	
Turn Bay Length (ft)	85		95		170		200		
Base Capacity (vph)	299	2254	104	2348	1219	163	248	182	243
Starvation Cap Reductn	0	161	0	577	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.13	1.84	0.76	0.02	0.72	1.06	0.10	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	2157	85	181	1276	25	107	5	249	10	7	24
Future Volume (veh/h)	23	2157	85	181	1276	25	107	5	249	10	7	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	2271	89	191	1343	26	113	5	262	11	7	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	302	2257	88	102	2335	1182	39	0	193	32	13	193
Arrive On Green	0.05	1.00	1.00	0.04	0.75	0.75	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3073	120	1781	3131	1585	0	0	1585	0	109	1585
Grp Volume(v), veh/h	24	1150	1210	191	1343	26	118	0	262	18	0	25
Grp Sat Flow(s),veh/h/ln	1781	1566	1627	1781	1566	1585	0	0	1585	109	0	1585
Q Serve(g_s), s	0.6	0.0	132.2	6.3	34.4	0.8	0.0	0.0	21.9	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.6	0.0	132.2	6.3	34.4	0.8	21.9	0.0	21.9	21.9	0.0	2.5
Prop In Lane	1.00		0.07	1.00		1.00	0.96		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	302	1150	1195	102	2335	1182	39	0	193	45	0	193
V/C Ratio(X)	0.08	1.00	1.01	1.87	0.58	0.02	3.01	0.00	1.36	0.40	0.00	0.13
Avail Cap(c_a), veh/h	321	1150	1195	102	2335	1182	39	0	193	45	0	193
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.2	0.0	0.0	69.4	10.2	5.9	90.0	0.0	79.1	74.4	0.0	70.5
Incr Delay (d2), s/veh	0.0	7.9	11.3	393.2	0.1	0.0	970.5	0.0	191.2	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.5	3.8	15.9	10.8	0.2	12.4	0.0	19.2	0.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	7.9	11.3	462.6	10.3	5.9	1060.5	0.0	270.3	79.9	0.0	70.8
LnGrp LOS	A	A	F	F	B	A	F	A	F	E	A	E
Approach Vol, veh/h		2384			1560			380			43	
Approach Delay, s/veh		9.7			65.6			515.6			74.6	
Approach LOS		A			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	139.0		29.0	10.0	141.0		29.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 6.3	* 1.3E2		21.9	* 6.2	* 1.3E2		21.9				
Max Q Clear Time (g_c+I1), s	8.3	134.2		23.9	2.6	36.4		23.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	35.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		74.3	
HCM 6th LOS		E	

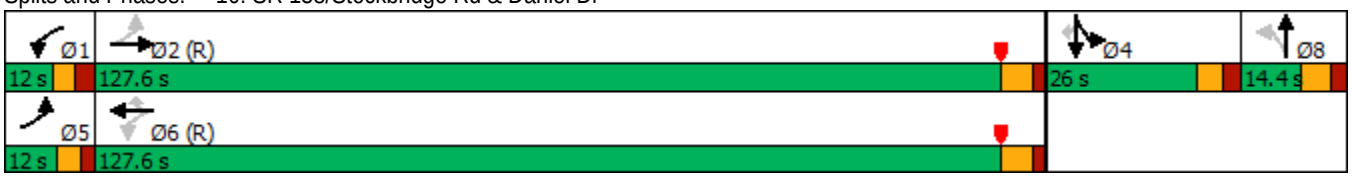
Notes

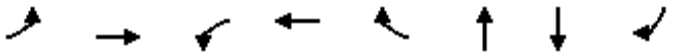
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	147	2122	9	1314	116	11	4	5	179
Future Volume (vph)	147	2122	9	1314	116	11	4	5	179
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	NA	Perm
Protected Phases	5	2	1	6			8	4	
Permitted Phases	2		6		6	8			4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0
Total Split (s)	12.0	127.6	12.0	127.6	127.6	14.4	14.4	26.0	26.0
Total Split (%)	6.7%	70.9%	6.7%	70.9%	70.9%	8.0%	8.0%	14.4%	14.4%
Yellow Time (s)	3.2	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5
All-Red Time (s)	1.8	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.5	6.3	6.3		6.3	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None
Act Effct Green (s)	139.1	135.0	134.3	127.5	127.5		8.0	19.4	19.4
Actuated g/C Ratio	0.77	0.75	0.75	0.71	0.71		0.04	0.11	0.11
v/c Ratio	0.54	1.02	0.09	0.61	0.10		0.36	0.91	0.62
Control Delay	18.6	42.6	3.7	5.1	0.2		71.5	121.6	31.0
Queue Delay	0.0	32.2	0.0	0.4	0.0		0.0	0.0	2.3
Total Delay	18.6	74.8	3.7	5.4	0.2		71.5	121.6	33.3
LOS	B	E	A	A	A		E	F	C
Approach Delay		71.2		5.0			71.5	76.2	
Approach LOS		E		A			E	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 159 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 48.4	Intersection LOS: D
Intersection Capacity Utilization 95.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: SR 138/Stockbridge Rd & Daniel Dr





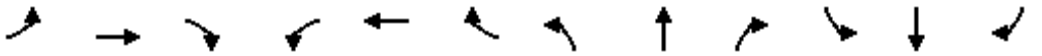
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	150	2194	9	1341	118	25	173	183
v/c Ratio	0.54	1.02	0.09	0.61	0.10	0.36	0.91	0.62
Control Delay	18.6	42.6	3.7	5.1	0.2	71.5	121.6	31.0
Queue Delay	0.0	32.2	0.0	0.4	0.0	0.0	0.0	2.3
Total Delay	18.6	74.8	3.7	5.4	0.2	71.5	121.6	33.3
Queue Length 50th (ft)	46	~737	1	114	1	18	205	50
Queue Length 95th (ft)	m5	m47	m2	118	m0	55	#353	142
Internal Link Dist (ft)		495		492		34	535	
Turn Bay Length (ft)	85		130					120
Base Capacity (vph)	276	2145	106	2185	1154	71	197	298
Starvation Cap Reductn	0	876	0	120	0	0	0	0
Spillback Cap Reductn	0	193	0	331	0	0	0	43
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.73	0.08	0.72	0.10	0.35	0.88	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	2122	28	9	1314	116	11	4	10	165	5	179
Future Volume (veh/h)	147	2122	28	9	1314	116	11	4	10	165	5	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1515	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	2165	29	9	1341	118	11	4	10	168	5	183
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	26	26	2	17	2	2	2	2	2	2	2
Cap, veh/h	357	2068	28	69	2157	1092	24	9	22	192	6	176
Arrive On Green	0.07	1.00	1.00	0.02	1.00	1.00	0.03	0.03	0.03	0.11	0.11	0.11
Sat Flow, veh/h	1781	2908	39	1781	3131	1585	752	274	684	1732	52	1585
Grp Volume(v), veh/h	150	1069	1125	9	1341	118	25	0	0	173	0	183
Grp Sat Flow(s),veh/h/ln	1781	1439	1508	1781	1566	1585	1710	0	0	1784	0	1585
Q Serve(g_s), s	4.7	0.0	120.0	0.3	0.0	0.0	2.6	0.0	0.0	17.2	0.0	20.0
Cycle Q Clear(g_c), s	4.7	0.0	120.0	0.3	0.0	0.0	2.6	0.0	0.0	17.2	0.0	20.0
Prop In Lane	1.00		0.03	1.00		1.00	0.44		0.40	0.97		1.00
Lane Grp Cap(c), veh/h	357	1023	1072	69	2157	1092	54	0	0	198	0	176
V/C Ratio(X)	0.42	1.04	1.05	0.13	0.62	0.11	0.46	0.00	0.00	0.87	0.00	1.04
Avail Cap(c_a), veh/h	360	1023	1072	112	2157	1092	77	0	0	198	0	176
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.80	0.80	0.80	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	46.8	0.0	0.0	85.6	0.0	0.0	78.7	0.0	80.0
Incr Delay (d2), s/veh	0.1	23.2	25.0	0.7	1.1	0.2	6.0	0.0	0.0	32.0	0.0	78.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	6.6	7.5	0.3	0.3	0.0	1.3	0.0	0.0	9.8	0.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	23.2	25.0	47.5	1.1	0.2	91.6	0.0	0.0	110.8	0.0	158.5
LnGrp LOS	A	F	F	D	A	A	F	A	A	F	A	F
Approach Vol, veh/h		2344			1468			25			356	
Approach Delay, s/veh		23.0			1.3			91.6			135.3	
Approach LOS		C			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	134.3		26.0	11.7	130.3		12.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 1.2E2		20.0	7.0	* 1.2E2		8.1				
Max Q Clear Time (g_c+I1), s	2.3	122.0		22.0	6.7	2.0		4.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	39.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		25.4	
HCM 6th LOS		C	

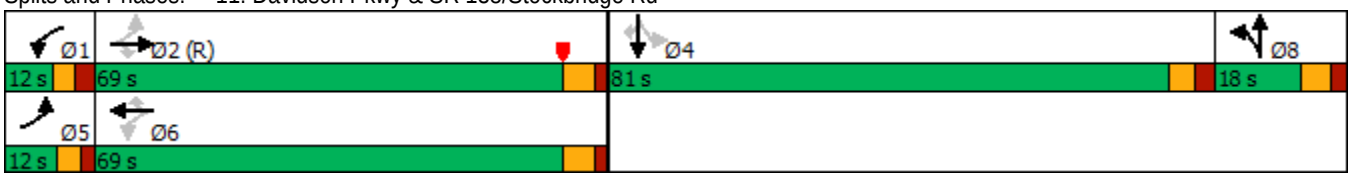
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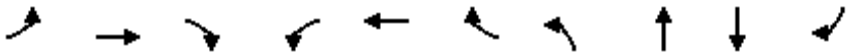
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	2062	1221	77	1323	61	1447	28	70	27	188
Future Volume (vph)	165	2062	1221	77	1323	61	1447	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		8	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	69.0	69.0	12.0	69.0	69.0	18.0	18.0	81.0	81.0	81.0
Total Split (%)	6.7%	38.3%	38.3%	6.7%	38.3%	38.3%	10.0%	10.0%	45.0%	45.0%	45.0%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.3	6.3		6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	71.0	62.7	62.7	70.0	62.7	62.7	11.7	11.7		75.0	75.0
Actuated g/C Ratio	0.39	0.35	0.35	0.39	0.35	0.35	0.06	0.06		0.42	0.42
v/c Ratio	1.55	2.15	1.76	0.76	1.38	0.10	7.88	7.44		2.10	0.27
Control Delay	280.5	546.4	368.7	83.1	212.2	4.4	3123.1	2923.8		586.8	18.8
Queue Delay	0.0	1.3	0.9	0.0	1.6	0.0	11.0	10.4		17.6	0.0
Total Delay	280.5	547.8	369.5	83.1	213.8	4.4	3134.1	2934.2		604.4	18.8
LOS	F	F	F	F	F	A	F	F		F	B
Approach Delay		471.8			198.1			3035.7		218.0	
Approach LOS		F			F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 96 (53%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 7.88	
Intersection Signal Delay: 1013.3	Intersection LOS: F
Intersection Capacity Utilization 134.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





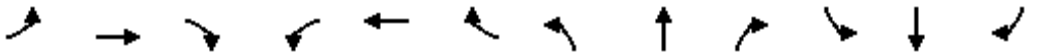
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	172	2148	1272	80	1378	64	859	833	101	196
v/c Ratio	1.55	2.15	1.76	0.76	1.38	0.10	7.88	7.44	2.10	0.27
Control Delay	280.5	546.4	368.7	83.1	212.2	4.4	3123.1	2923.8	586.8	18.8
Queue Delay	0.0	1.3	0.9	0.0	1.6	0.0	11.0	10.4	17.6	0.0
Total Delay	280.5	547.8	369.5	83.1	213.8	4.4	3134.1	2934.2	604.4	18.8
Queue Length 50th (ft)	~233	~2136	~2168	57	~1120	3	~2070	~2013	~187	77
Queue Length 95th (ft)	m#108	m#1316	m#1102	m#142	#1264	m16	#2350	#2294	#272	142
Internal Link Dist (ft)		432			495			439	264	
Turn Bay Length (ft)	75		165	125						
Base Capacity (vph)	111	997	722	105	997	610	109	112	48	713
Starvation Cap Reductn	0	125	88	0	0	0	0	0	0	0
Spillback Cap Reductn	0	220	0	0	250	0	38	38	17	16
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.55	2.76	2.01	0.76	1.84	0.10	12.10	11.26	3.26	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	2062	1221	77	1323	61	1447	28	150	70	27	188
Future Volume (veh/h)	165	2062	1221	77	1323	61	1447	28	150	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2148	0	80	1378	64	1673	0	0	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	341	1813		98	1804	993	232	122	0	180	69	219
Arrive On Green	0.05	0.84	0.00	0.07	1.00	1.00	0.06	0.00	0.00	0.14	0.14	0.14
Sat Flow, veh/h	1781	2878	1585	1781	2878	1585	3563	1870	0	1305	500	1585
Grp Volume(v), veh/h	172	2148	0	80	1378	64	1673	0	0	101	0	196
Grp Sat Flow(s),veh/h/ln	1781	1439	1585	1781	1439	1585	1781	1870	0	1805	0	1585
Q Serve(g_s), s	6.6	113.4	0.0	3.9	0.0	0.0	11.7	0.0	0.0	9.2	0.0	21.9
Cycle Q Clear(g_c), s	6.6	113.4	0.0	3.9	0.0	0.0	11.7	0.0	0.0	9.2	0.0	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.72		1.00
Lane Grp Cap(c), veh/h	341	1813		98	1804	993	232	122	0	250	0	219
V/C Ratio(X)	0.50	1.18		0.81	0.76	0.06	7.22	0.00	0.00	0.40	0.00	0.89
Avail Cap(c_a), veh/h	341	1813		104	1804	993	232	122	0	752	0	660
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.75	0.75	0.75	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	14.6	0.0	51.5	0.0	0.0	84.2	0.0	0.0	70.8	0.0	76.3
Incr Delay (d2), s/veh	0.1	83.6	0.0	28.4	1.8	0.0	2810.1	0.0	0.0	1.1	0.0	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	39.9	0.0	4.3	0.4	0.0	95.8	0.0	0.0	4.4	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	98.2	0.0	80.0	1.8	0.0	2894.2	0.0	0.0	71.8	0.0	88.2
LnGrp LOS	B	F		E	A	A	F	A	A	E	A	F
Approach Vol, veh/h		2320	A		1522			1673			297	
Approach Delay, s/veh		91.7			5.8			2894.2			82.7	
Approach LOS		F			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	119.7		30.9	12.0	119.1		18.0				
Change Period (Y+Rc), s	5.5	* 6.3		6.0	5.0	* 6.3		6.3				
Max Green Setting (Gmax), s	6.5	* 63		75.0	7.0	* 63		11.7				
Max Q Clear Time (g_c+I1), s	5.9	115.4		23.9	8.6	2.0		13.7				
Green Ext Time (p_c), s	0.0	0.0		1.0	0.0	32.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		875.5
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

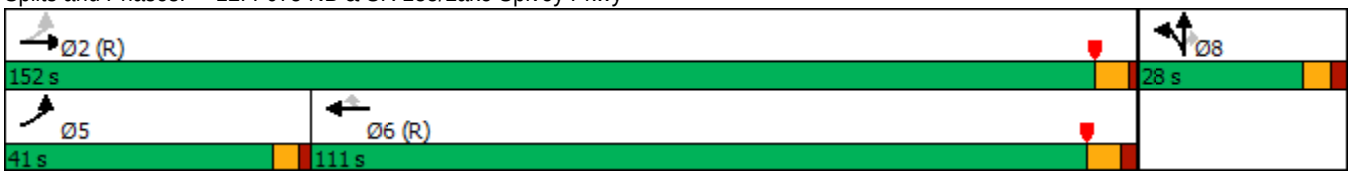
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	491	3126	2436	603	0	361
Future Volume (vph)	491	3126	2436	603	0	361
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	147.0	146.0	104.0	104.0	21.9	21.9
Actuated g/C Ratio	0.82	0.81	0.58	0.58	0.12	0.12
v/c Ratio	1.29	1.40	1.53	0.62	0.32	1.57
Control Delay	187.9	196.9	266.8	12.1	76.8	312.9
Queue Delay	0.0	3.2	0.9	45.3	1.1	6.4
Total Delay	187.9	200.1	267.8	57.5	77.9	319.3
LOS	F	F	F	E	E	F
Approach Delay		198.4	226.0		281.9	
Approach LOS		F	F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.57	
Intersection Signal Delay: 215.3	Intersection LOS: F
Intersection Capacity Utilization 138.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





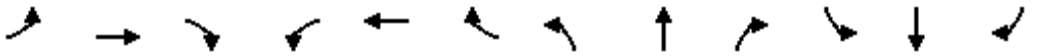
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	511	3256	2538	628	69	376
v/c Ratio	1.29	1.40	1.53	0.62	0.32	1.57
Control Delay	187.9	196.9	266.8	12.1	76.8	312.9
Queue Delay	0.0	3.2	0.9	45.3	1.1	6.4
Total Delay	187.9	200.1	267.8	57.5	77.9	319.3
Queue Length 50th (ft)	~716	~2701	~2254	448	76	~568
Queue Length 95th (ft)	m362	m330	m565	m161	132	#793
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	395	2323	1655	1018	215	240
Starvation Cap Reductn	0	187	390	437	0	0
Spillback Cap Reductn	0	1387	10	0	48	80
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.29	3.48	2.01	1.08	0.41	2.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	491	3126	0	0	2436	603	66	0	361	0	0	0
Future Volume (veh/h)	491	3126	0	0	2436	603	66	0	361	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	511	3256	0	0	2538	628	69	0	376			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	396	2318	0	0	1663	916	217	0	193			
Arrive On Green	0.40	1.00	0.00	0.00	0.58	0.58	0.12	0.00	0.12			
Sat Flow, veh/h	1781	2954	0	0	2954	1585	1781	0	1585			
Grp Volume(v), veh/h	511	3256	0	0	2538	628	69	0	376			
Grp Sat Flow(s),veh/h/ln	1781	1439	0	0	1439	1585	1781	0	1585			
Q Serve(g_s), s	36.0	0.0	0.0	0.0	104.0	49.9	6.4	0.0	21.9			
Cycle Q Clear(g_c), s	36.0	0.0	0.0	0.0	104.0	49.9	6.4	0.0	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	396	2318	0	0	1663	916	217	0	193			
V/C Ratio(X)	1.29	1.40	0.00	0.00	1.53	0.69	0.32	0.00	1.95			
Avail Cap(c_a), veh/h	396	2334	0	0	1663	916	217	0	193			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.3	0.0	0.0	0.0	38.0	26.6	72.2	0.0	79.1			
Incr Delay (d2), s/veh	132.1	182.3	0.0	0.0	237.1	0.4	0.8	0.0	445.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	27.7	58.7	0.0	0.0	89.3	18.3	2.9	0.0	32.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	180.4	182.3	0.0	0.0	275.1	27.0	73.1	0.0	524.8			
LnGrp LOS	F	F	A	A	F	C	E	A	F			
Approach Vol, veh/h		3767			3166			445				
Approach Delay, s/veh		182.0			225.9			454.8				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		152.0			41.0	111.0		28.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			38.0	106.0		23.9				
Green Ext Time (p_c), s		142.5			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	217.3
HCM 6th LOS	F

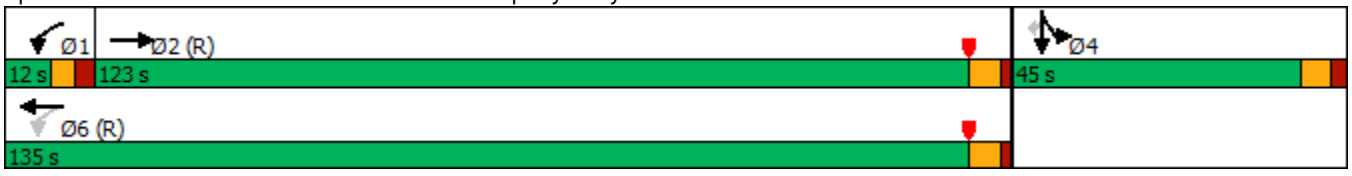
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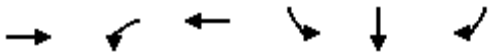
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2848	354	2147	798	0	795
Future Volume (vph)	2848	354	2147	798	0	795
Turn Type	NA	pm+pt	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases		6				4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	1.63	3.61	1.08	1.14	1.15	1.38
Control Delay	304.9	1195.0	64.8	152.8	153.7	228.8
Queue Delay	0.8	0.0	10.5	0.0	0.0	0.0
Total Delay	305.6	1195.0	75.3	152.8	153.7	228.8
LOS	F	F	E	F	F	F
Approach Delay	305.6		233.9		191.0	
Approach LOS	F		F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 3.61	
Intersection Signal Delay: 254.0	Intersection LOS: F
Intersection Capacity Utilization 138.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





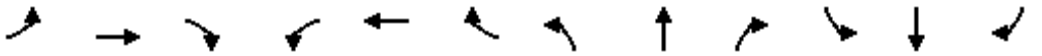
Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	3018	365	2213	411	412	820
v/c Ratio	1.63	3.61	1.08	1.14	1.15	1.38
Control Delay	304.9	1195.0	64.8	152.8	153.7	228.8
Queue Delay	0.8	0.0	10.5	0.0	0.0	0.0
Total Delay	305.6	1195.0	75.3	152.8	153.7	228.8
Queue Length 50th (ft)	~2691	~734	~706	~594	~597	~725
Queue Length 95th (ft)	m#2121	m#432	m227	#834	#836	#875
Internal Link Dist (ft)	603		736		920	
Turn Bay Length (ft)		95		475		
Base Capacity (vph)	1857	101	2054	359	359	596
Starvation Cap Reductn	0	0	133	0	0	0
Spillback Cap Reductn	399	0	563	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.07	3.61	1.48	1.14	1.15	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2848	80	354	2147	0	0	0	0	798	0	795
Future Volume (veh/h)	0	2848	80	354	2147	0	0	0	0	798	0	795
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2936	82	365	2213	0				823	0	820
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	1860	52	100	2064	0				762	0	678
Arrive On Green	0.00	0.65	0.65	0.07	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2936	79	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1470	1548	365	2213	0				823	0	820
Grp Sat Flow(s),veh/h/ln	0	1439	1500	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	117.1	117.1	6.1	129.1	0.0				38.5	0.0	38.5
Cycle Q Clear(g_c), s	0.0	117.1	117.1	6.1	129.1	0.0				38.5	0.0	38.5
Prop In Lane	0.00		0.05	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	936	976	100	2064	0				762	0	678
V/C Ratio(X)	0.00	1.57	1.59	3.64	1.07	0.00				1.08	0.00	1.21
Avail Cap(c_a), veh/h	0	936	976	100	2064	0				762	0	678
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.5	31.5	60.8	0.0	0.0				70.8	0.0	70.8
Incr Delay (d2), s/veh	0.0	257.3	264.0	1188.7	33.6	0.0				56.4	0.0	107.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	104.2	110.4	36.0	9.6	0.0				23.3	0.0	25.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	288.7	295.4	1249.6	33.6	0.0				127.1	0.0	178.4
LnGrp LOS	A	F	F	F	F	A				F	A	F
Approach Vol, veh/h		3018			2578						1643	
Approach Delay, s/veh		292.2			205.8						152.7	
Approach LOS		F			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	8.1	119.1		40.5		131.1
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		229.7
HCM 6th LOS		F

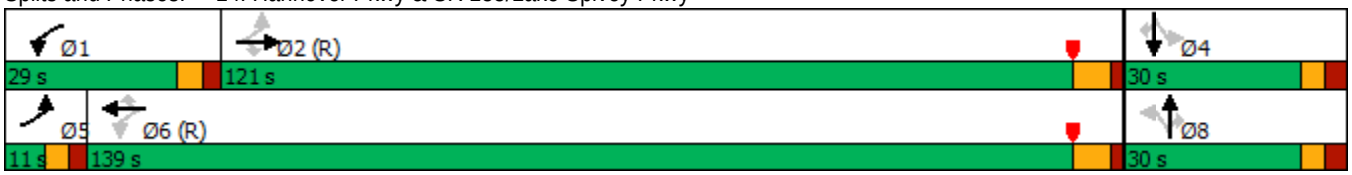
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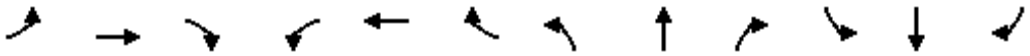
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	2528	47	197	2527	95	65	23	197	85	17	46
Future Volume (vph)	45	2528	47	197	2527	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.9	123.3	123.3	150.0	140.2	140.2	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.50	1.20	0.04	0.86	1.06	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	30.3	111.2	0.0	61.5	49.4	3.5	88.6	73.4	37.3	100.2	72.5	1.9
Queue Delay	0.0	0.6	0.0	0.0	18.2	0.0	0.0	0.0	76.4	150.8	0.0	0.0
Total Delay	30.3	111.7	0.0	61.5	67.6	3.5	88.6	73.4	113.7	251.0	72.5	1.9
LOS	C	F	A	E	E	A	F	E	F	F	E	A
Approach Delay		108.3			65.0			104.7			153.1	
Approach LOS		F			E			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 88.5	Intersection LOS: F
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





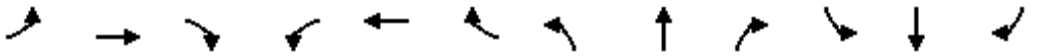
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2633	49	205	2632	99	68	24	205	89	18	48
v/c Ratio	0.50	1.20	0.04	0.86	1.06	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	30.3	111.2	0.0	61.5	49.4	3.5	88.6	73.4	37.3	100.2	72.5	1.9
Queue Delay	0.0	0.6	0.0	0.0	18.2	0.0	0.0	0.0	76.4	150.8	0.0	0.0
Total Delay	30.3	111.7	0.0	61.5	67.6	3.5	88.6	73.4	113.7	251.0	72.5	1.9
Queue Length 50th (ft)	9	~2016	0	188	~1806	10	78	26	65	103	20	0
Queue Length 95th (ft)	m5	m#1508	m0	m154	m1331	m8	132	58	160	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	96	2188	1112	270	2488	1245	182	244	335	181	244	289
Starvation Cap Reductn	0	37	0	0	416	0	0	0	0	0	0	0
Spillback Cap Reductn	0	433	0	0	0	0	0	0	235	165	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	1.50	0.04	0.76	1.27	0.08	0.37	0.10	2.05	5.56	0.07	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	2528	47	197	2527	95	65	23	197	85	17	46
Future Volume (veh/h)	45	2528	47	197	2527	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2633	49	205	2632	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	76	2218	1084	239	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.10	0.99	0.99	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2633	49	205	2632	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.5	123.1	0.0	10.0	133.9	0.1	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.5	123.1	0.0	10.0	133.9	0.1	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	2218	1084	239	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.62	1.19	0.05	0.86	1.09	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	93	2218	1084	328	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	0.0	41.8	1.0	0.2	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.3	84.7	0.0	1.2	41.7	0.0	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	26.1	0.0	9.0	14.4	0.0	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	84.7	0.0	43.1	42.6	0.3	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	D	F	A	D	F	A	E	E	F	E	E	E
Approach Vol, veh/h		2729			2936			297			155	
Approach Delay, s/veh		82.6			41.2			116.6			75.1	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	130.9		30.0	9.2	140.8		30.0				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24				
Max Q Clear Time (g_c+I1), s	12.0	125.1		17.3	3.5	135.9		25.2				
Green Ext Time (p_c), s	0.2	0.0		0.4	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		64.2	
HCM 6th LOS		E	

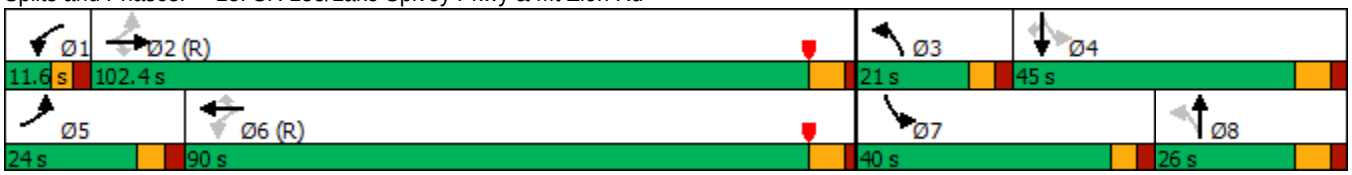
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	239	2060	168	47	2091	434	148	87	442	79	237
Future Volume (vph)	239	2060	168	47	2091	434	148	87	442	79	237
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	109.1	99.5	99.5	90.7	83.6	83.6	33.0	17.5	58.6	37.2	37.2
Actuated g/C Ratio	0.61	0.55	0.55	0.50	0.46	0.46	0.18	0.10	0.33	0.21	0.21
v/c Ratio	1.11	1.24	0.19	0.49	1.50	0.56	0.57	0.75	1.13	0.22	0.55
Control Delay	118.2	140.6	8.1	26.0	258.3	20.4	56.2	97.3	132.3	60.8	26.5
Queue Delay	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.1	1.0	0.0	0.1
Total Delay	118.2	141.6	8.1	26.0	258.8	20.4	56.2	97.4	133.3	60.8	26.7
LOS	F	F	A	C	F	C	E	F	F	E	C
Approach Delay		130.2			214.3			75.3		92.4	
Approach LOS		F			F			E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay: 158.6	Intersection LOS: F
Intersection Capacity Utilization 124.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





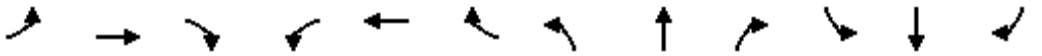
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	254	2191	179	50	2224	462	157	136	470	84	252
v/c Ratio	1.11	1.24	0.19	0.49	1.50	0.56	0.57	0.75	1.13	0.22	0.55
Control Delay	118.2	140.6	8.1	26.0	258.3	20.4	56.2	97.3	132.3	60.8	26.5
Queue Delay	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.1	1.0	0.0	0.1
Total Delay	118.2	141.6	8.1	26.0	258.8	20.4	56.2	97.4	133.3	60.8	26.7
Queue Length 50th (ft)	~315	~1722	31	25	~1910	164	136	147	~526	83	91
Queue Length 95th (ft)	m#259	m#1415	m26	m25	m#1762	m163	203	#239	#760	139	192
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	228	1767	934	102	1483	825	282	195	416	392	462
Starvation Cap Reductn	0	52	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	460	0	0	190	0	0	1	39	0	13
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	1.68	0.19	0.49	1.72	0.56	0.56	0.70	1.25	0.21	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	2060	168	47	2091	434	148	87	40	442	79	237
Future Volume (veh/h)	239	2060	168	47	2091	434	148	87	40	442	79	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	254	2191	179	50	2224	462	157	93	43	470	84	252
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	215	1794	876	95	1560	762	281	107	50	393	363	308
Arrive On Green	0.13	0.74	0.74	0.04	0.64	0.64	0.08	0.09	0.09	0.19	0.19	0.19
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	1781	1870	1585
Grp Volume(v), veh/h	254	2191	179	50	2224	462	157	0	136	470	84	252
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	17.7	99.5	6.3	2.5	86.5	30.9	14.4	0.0	13.7	34.0	6.8	27.4
Cycle Q Clear(g_c), s	17.7	99.5	6.3	2.5	86.5	30.9	14.4	0.0	13.7	34.0	6.8	27.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	215	1794	876	95	1560	762	281	0	157	393	363	308
V/C Ratio(X)	1.18	1.22	0.20	0.53	1.43	0.61	0.56	0.00	0.87	1.20	0.23	0.82
Avail Cap(c_a), veh/h	215	1794	876	100	1560	762	281	0	186	393	394	334
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	23.8	11.5	42.5	32.5	22.4	67.7	0.0	81.0	60.0	61.2	69.5
Incr Delay (d2), s/veh	85.9	100.2	0.0	0.4	192.1	0.3	2.5	0.0	33.9	111.1	0.7	16.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	53.7	2.2	1.1	70.3	11.0	6.9	0.0	7.8	28.3	3.3	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.8	124.0	11.5	42.9	224.5	22.7	70.1	0.0	114.9	171.0	61.9	85.7
LnGrp LOS	F	F	B	D	F	C	E	A	F	F	E	F
Approach Vol, veh/h		2624			2736			293			806	
Approach Delay, s/veh		118.7			187.1			90.9			133.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	105.9	21.0	42.1	24.0	92.9	40.0	23.1
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.5	101.5	16.4	29.4	19.7	88.5	36.0	15.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	148.2
HCM 6th LOS	F

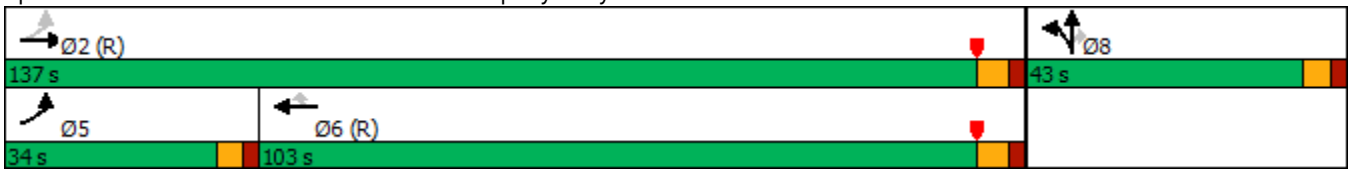
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	320	2497	1659	961	0	191
Future Volume (vph)	320	2497	1659	961	0	191
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	136.1	134.7	96.1	96.1	32.3	32.3
Actuated g/C Ratio	0.76	0.75	0.53	0.53	0.18	0.18
v/c Ratio	0.95	1.14	1.06	0.96	0.90	0.63
Control Delay	59.1	93.8	47.5	16.8	101.9	57.3
Queue Delay	0.0	0.5	18.7	39.4	6.8	0.1
Total Delay	59.1	94.3	66.1	56.2	108.7	57.4
LOS	E	F	E	E	F	E
Approach Delay		90.3	62.5		87.1	
Approach LOS		F	E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 77.7	Intersection LOS: E
Intersection Capacity Utilization 113.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





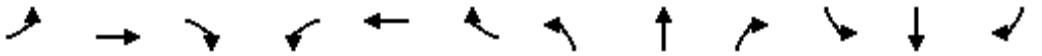
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	348	2714	1803	1045	285	208
v/c Ratio	0.95	1.14	1.06	0.96	0.90	0.63
Control Delay	59.1	93.8	47.5	16.8	101.9	57.3
Queue Delay	0.0	0.5	18.7	39.4	6.8	0.1
Total Delay	59.1	94.3	66.1	56.2	108.7	57.4
Queue Length 50th (ft)	360	~1963	~1233	1153	331	167
Queue Length 95th (ft)	m#338	m#1618	m476	m4	#456	259
Internal Link Dist (ft)		872	930		821	
Turn Bay Length (ft)	140					515
Base Capacity (vph)	367	2391	1705	1087	362	369
Starvation Cap Reductn	0	441	137	131	0	0
Spillback Cap Reductn	0	430	485	0	45	7
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	1.39	1.48	1.09	0.90	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	2497	0	0	1659	961	262	0	191	0	0	0
Future Volume (veh/h)	320	2497	0	0	1659	961	262	0	191	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	348	2714	0	0	1803	0	285	0	208			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	369	2449	0	0	2052		308	0	274			
Arrive On Green	0.12	1.00	0.00	0.00	1.00	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	1781	0	1585			
Grp Volume(v), veh/h	348	2714	0	0	1803	0	285	0	208			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	13.7	135.9	0.0	0.0	0.0	0.0	28.4	0.0	22.5			
Cycle Q Clear(g_c), s	13.7	135.9	0.0	0.0	0.0	0.0	28.4	0.0	22.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	369	2449	0	0	2052		308	0	274			
V/C Ratio(X)	0.94	1.11	0.00	0.00	0.88		0.93	0.00	0.76			
Avail Cap(c_a), veh/h	487	2449	0	0	2052		365	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.7	0.0	0.0	0.0	0.0	0.0	73.3	0.0	70.9			
Incr Delay (d2), s/veh	3.6	49.4	0.0	0.0	0.6	0.0	24.9	0.0	6.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.5	16.8	0.0	0.0	0.2	0.0	14.8	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	49.4	0.0	0.0	0.6	0.0	98.2	0.0	77.5			
LnGrp LOS	C	F	A	A	A		F	A	E			
Approach Vol, veh/h		3062			1803	A		493				
Approach Delay, s/veh		46.3			0.6			89.5				
Approach LOS		D			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		142.8			22.0	120.8		37.2				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		137.9			15.7	2.0		30.4				
Green Ext Time (p_c), s		0.0			0.8	59.3		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C

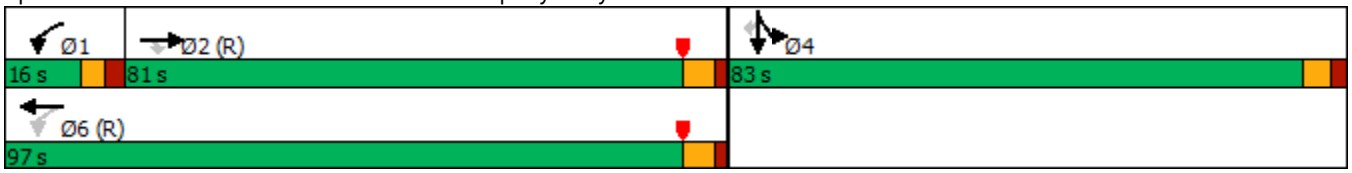
Notes

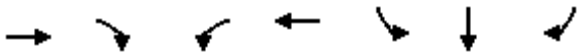
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1592	328	192	1826	1227	0	846
Future Volume (vph)	1592	328	192	1826	1227	0	846
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	91.2	90.7	76.8	76.8	76.8
Actuated g/C Ratio	0.42	0.42	0.51	0.50	0.43	0.43	0.43
v/c Ratio	1.28	0.41	1.44	1.21	0.91	0.91	1.27
Control Delay	164.7	4.6	243.4	122.5	66.2	66.4	173.9
Queue Delay	0.0	0.0	0.0	0.3	56.4	56.3	0.0
Total Delay	164.7	4.6	243.4	122.7	122.6	122.7	173.9
LOS	F	A	F	F	F	F	F
Approach Delay	137.4			134.2		143.6	
Approach LOS	F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 138.4	Intersection LOS: F
Intersection Capacity Utilization 113.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





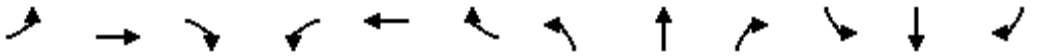
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1694	349	204	1943	652	653	900
v/c Ratio	1.28	0.41	1.44	1.21	0.91	0.91	1.27
Control Delay	164.7	4.6	243.4	122.5	66.2	66.4	173.9
Queue Delay	0.0	0.0	0.0	0.3	56.4	56.3	0.0
Total Delay	164.7	4.6	243.4	122.7	122.6	122.7	173.9
Queue Length 50th (ft)	~1327	48	~272	~1474	756	758	~1302
Queue Length 95th (ft)	m#1354	m53	m#275	m#1385	#1023	#1025	#1572
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	861	142	1609	717	717	706
Starvation Cap Reductn	0	0	0	127	0	0	0
Spillback Cap Reductn	0	0	0	0	480	480	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.28	0.41	1.44	1.31	2.75	2.76	1.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1592	328	192	1826	0	0	0	0	1227	0	846
Future Volume (veh/h)	0	1592	328	192	1826	0	0	0	0	1227	0	846
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1694	349	204	1943	0				1305	0	900
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1346	658	141	1635	0				1520	0	676
Arrive On Green	0.00	0.83	0.83	0.06	0.50	0.00				0.43	0.00	0.43
Sat Flow, veh/h	0	3329	1585	1781	3329	0				3563	0	1585
Grp Volume(v), veh/h	0	1694	349	204	1943	0				1305	0	900
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	74.7	12.0	10.2	90.7	0.0				59.7	0.0	76.8
Cycle Q Clear(g_c), s	0.0	74.7	12.0	10.2	90.7	0.0				59.7	0.0	76.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1346	658	141	1635	0				1520	0	676
V/C Ratio(X)	0.00	1.26	0.53	1.45	1.19	0.00				0.86	0.00	1.33
Avail Cap(c_a), veh/h	0	1346	658	141	1635	0				1520	0	676
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.18	0.18	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.3	10.0	57.0	44.6	0.0				46.7	0.0	51.6
Incr Delay (d2), s/veh	0.0	117.4	0.6	205.0	85.5	0.0				5.2	0.0	158.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	27.7	2.9	14.5	54.4	0.0				26.5	0.0	58.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	132.7	10.5	262.0	130.2	0.0				51.9	0.0	210.5
LnGrp LOS	A	F	B	F	F	A				D	A	F
Approach Vol, veh/h		2043			2147						2205	
Approach Delay, s/veh		111.8			142.7						116.6	
Approach LOS		F			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	81.0		83.0		97.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	12.2	76.7		78.8		92.7
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		123.8
HCM 6th LOS		F

Notes

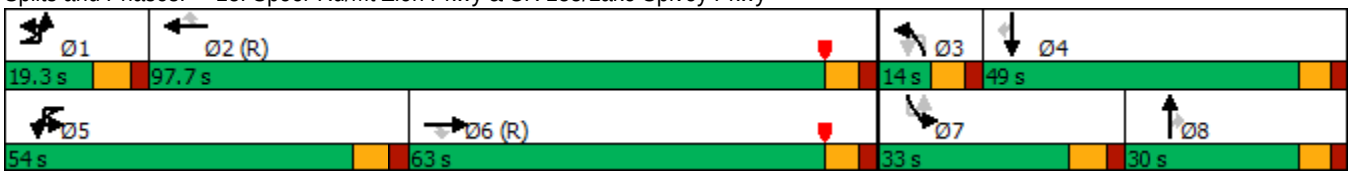
User approved volume balancing among the lanes for turning movement.

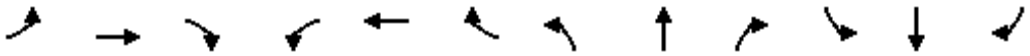
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	983	132	829	1233	328	82	194	332	454	401	181
Future Volume (vph)	159	983	132	829	1233	328	82	194	332	454	401	181
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	13.4	58.7	58.7	50.6	96.0	96.0	7.1	16.4	16.4	25.6	35.4	35.4
Actuated g/C Ratio	0.07	0.33	0.33	0.28	0.53	0.53	0.04	0.09	0.09	0.14	0.20	0.20
v/c Ratio	0.66	1.02	0.21	0.90	0.76	0.34	0.64	0.63	0.76	0.98	0.61	0.44
Control Delay	98.8	83.2	7.1	69.9	36.7	5.3	106.0	87.4	17.6	111.2	69.5	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.8	83.2	7.1	69.9	36.7	5.3	106.0	87.4	17.6	111.2	69.5	16.1
LOS	F	F	A	E	D	A	F	F	B	F	E	B
Approach Delay		77.2			43.9			51.8			78.4	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 59.5	Intersection LOS: E
Intersection Capacity Utilization 107.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





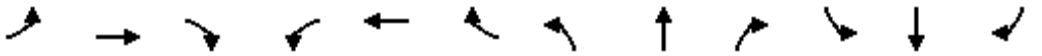
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	167	1035	139	873	1298	345	86	204	349	478	422	191
v/c Ratio	0.66	1.02	0.21	0.90	0.76	0.34	0.64	0.63	0.76	0.98	0.61	0.44
Control Delay	98.8	83.2	7.1	69.9	36.7	5.3	106.0	87.4	17.6	111.2	69.5	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.8	83.2	7.1	69.9	36.7	5.3	106.0	87.4	17.6	111.2	69.5	16.1
Queue Length 50th (ft)	95	~688	22	526	553	41	52	124	0	294	242	32
Queue Length 95th (ft)	138	#837	m50	m422	m435	m13	#89	167	108	#417	294	110
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	259	1015	650	965	1704	1005	135	460	509	488	833	493
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	1.02	0.21	0.90	0.76	0.34	0.64	0.44	0.69	0.98	0.51	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	983	132	829	1233	328	82	194	332	454	401	181
Future Volume (veh/h)	159	983	132	829	1233	328	82	194	332	454	401	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	167	1035	139	873	1298	345	86	204	349	478	422	191
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	203	982	492	892	1655	809	122	462	206	491	852	380
Arrive On Green	0.12	0.62	0.62	0.52	1.00	1.00	0.04	0.13	0.13	0.14	0.24	0.24
Sat Flow, veh/h	3456	3159	1585	3456	3244	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	167	1035	139	873	1298	345	86	204	349	478	422	191
Grp Sat Flow(s),veh/h/ln	1728	1580	1585	1728	1622	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	8.5	55.9	7.2	44.5	0.0	0.0	4.4	9.5	23.4	24.8	18.4	18.8
Cycle Q Clear(g_c), s	8.5	55.9	7.2	44.5	0.0	0.0	4.4	9.5	23.4	24.8	18.4	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	982	492	892	1655	809	122	462	206	491	852	380
V/C Ratio(X)	0.82	1.05	0.28	0.98	0.78	0.43	0.70	0.44	1.69	0.97	0.50	0.50
Avail Cap(c_a), veh/h	227	982	492	893	1655	809	136	462	206	491	852	380
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.5	34.1	24.9	43.0	0.0	0.0	85.9	72.3	78.3	76.9	59.0	59.2
Incr Delay (d2), s/veh	13.7	39.1	0.9	5.2	0.4	0.1	13.5	0.7	332.2	33.5	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	20.6	2.6	15.7	0.1	0.0	2.2	4.4	28.5	13.2	8.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	73.2	25.8	48.2	0.4	0.1	99.4	72.9	410.5	110.3	59.5	60.2
LnGrp LOS	F	F	C	D	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1341			2516			639			1091	
Approach Delay, s/veh		70.7			16.9			260.9			81.9	
Approach LOS		E			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	98.9	13.3	49.7	54.0	63.0	33.0	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	10.5	2.0	6.4	20.8	46.5	57.9	26.8	25.4
Green Ext Time (p_c), s	0.1	41.0	0.0	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.4
HCM 6th LOS	E

Notes

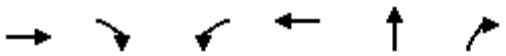
User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	958	60	431	1007	0	248
Future Volume (vph)	958	60	431	1007	0	248
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0
Minimum Split (s)	18.8	18.8	12.0	18.8	14.7	14.7
Total Split (s)	44.0	44.0	25.0	69.0	21.0	21.0
Total Split (%)	48.9%	48.9%	27.8%	76.7%	23.3%	23.3%
Yellow Time (s)	4.8	4.8	3.5	4.8	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.0	6.8	6.7	6.7
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	41.5	41.5	67.9	67.1	9.4	9.4
Actuated g/C Ratio	0.46	0.46	0.75	0.75	0.10	0.10
v/c Ratio	0.70	0.08	0.82	0.46	0.12	0.65
Control Delay	23.7	0.6	40.6	4.3	36.8	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	0.6	40.6	4.3	36.8	13.1
LOS	C	A	D	A	D	B
Approach Delay	22.3			15.2	14.9	
Approach LOS	C			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTU, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 82.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 19: Spivey Rd & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	1008	63	454	1060	22	261
v/c Ratio	0.70	0.08	0.82	0.46	0.12	0.65
Control Delay	23.7	0.6	40.6	4.3	36.8	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	0.6	40.6	4.3	36.8	13.1
Queue Length 50th (ft)	241	0	301	128	12	0
Queue Length 95th (ft)	336	4	#484	228	32	66
Internal Link Dist (ft)	559			1742	3265	
Turn Bay Length (ft)		225	540			225
Base Capacity (vph)	1436	794	574	2321	286	476
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.08	0.79	0.46	0.08	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	0	958	60	431	1007	0	21	0	248	0	0
Future Volume (veh/h)	0	0	958	60	431	1007	0	21	0	248	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		0	1663	1870	1870	1663	0	1900	1900	1900		
Adj Flow Rate, veh/h		0	1008	63	454	1060	0	22	0	261		
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %		0	16	2	2	16	0	0	0	0		
Cap, veh/h		0	1424	714	491	2184	0	288	0	256		
Arrive On Green		0.00	0.45	0.45	0.35	1.00	0.00	0.16	0.00	0.16		
Sat Flow, veh/h		0	3243	1585	1781	3243	0	1810	0	1610		
Grp Volume(v), veh/h		0	1008	63	454	1060	0	22	0	261		
Grp Sat Flow(s),veh/h/ln		0	1580	1585	1781	1580	0	1810	0	1610		
Q Serve(g_s), s		0.0	23.2	2.0	13.1	0.0	0.0	0.9	0.0	14.3		
Cycle Q Clear(g_c), s		0.0	23.2	2.0	13.1	0.0	0.0	0.9	0.0	14.3		
Prop In Lane		0.00		1.00	1.00		0.00	1.00		1.00		
Lane Grp Cap(c), veh/h		0	1424	714	491	2184	0	288	0	256		
V/C Ratio(X)		0.00	0.71	0.09	0.92	0.49	0.00	0.08	0.00	1.02		
Avail Cap(c_a), veh/h		0	1424	714	558	2184	0	288	0	256		
HCM Platoon Ratio		1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)		0.00	1.00	1.00	0.63	0.63	0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh		0.0	19.9	14.1	12.3	0.0	0.0	32.2	0.0	37.9		
Incr Delay (d2), s/veh		0.0	3.0	0.2	14.1	0.5	0.0	0.1	0.0	61.6		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		0.0	8.1	0.7	4.9	0.1	0.0	0.4	0.0	9.8		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	22.9	14.4	26.3	0.5	0.0	32.3	0.0	99.4		
LnGrp LOS		A	C	B	C	A	A	C	A	F		
Approach Vol, veh/h			1071			1514			283			
Approach Delay, s/veh			22.4			8.2			94.2			
Approach LOS			C			A			F			

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	69.0			21.6	47.4		21.0					
Change Period (Y+Rc), s	6.8			6.0	6.8		6.7					
Max Green Setting (Gmax), s	62.2			19.0	37.2		14.3					
Max Q Clear Time (g_c+I1), s	2.0			15.1	25.2		16.3					
Green Ext Time (p_c), s	26.6			0.6	9.0		0.0					

Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			C									

Notes

User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(I)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Intersection	
Int Delay, s/veh	69.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	129	507	367	131	137	214
Future Vol, veh/h	129	507	367	131	137	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	143	563	408	146	152	238

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	1330	481
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	849	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1026	-	-	-	171	585
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	419	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	~ 136	585
Mov Cap-2 Maneuver	-	-	-	-	~ 136	-
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	419	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	290.2
HCM LOS			F

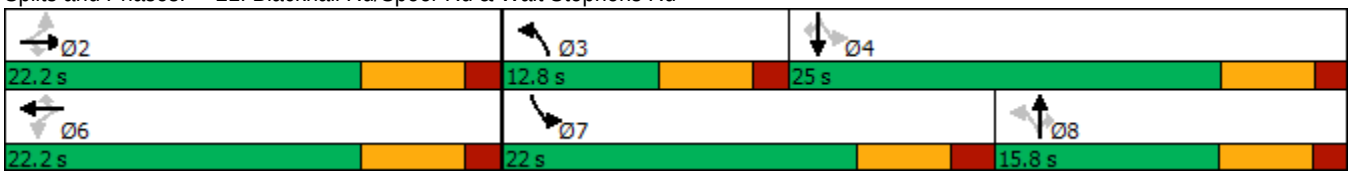
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1026	-	-	-	256
HCM Lane V/C Ratio	0.14	-	-	-	1.523
HCM Control Delay (s)	9.1	0	-	-	290.2
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	23.1

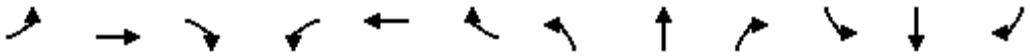
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	529	88	148	436	359	48	195	124	760	475	21
Future Volume (vph)	33	529	88	148	436	359	48	195	124	760	475	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	17.0	10.0	10.0	31.6	24.4	24.4
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.28	0.17	0.17	0.53	0.41	0.41
v/c Ratio	0.26	1.07	0.14	1.19	0.88	0.53	0.13	0.64	0.25	1.15	0.63	0.03
Control Delay	24.0	86.9	0.5	169.7	44.1	5.6	9.7	34.3	1.2	101.7	22.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	86.9	0.5	169.7	44.1	5.6	9.7	34.3	1.2	101.7	22.1	0.0
LOS	C	F	A	F	D	A	A	C	A	F	C	A
Approach Delay		72.0			49.0			20.0			69.9	
Approach LOS		E			D			B			E	

Intersection Summary			
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 58.5		Intersection LOS: E	
Intersection Capacity Utilization 112.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd



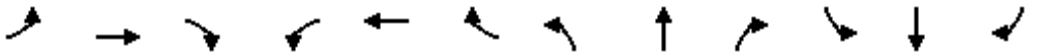


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	534	89	149	440	363	48	197	125	768	480	21
v/c Ratio	0.26	1.07	0.14	1.19	0.88	0.53	0.13	0.64	0.25	1.15	0.63	0.03
Control Delay	24.0	86.9	0.5	169.7	44.1	5.6	9.7	34.3	1.2	101.7	22.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	86.9	0.5	169.7	44.1	5.6	9.7	34.3	1.2	101.7	22.1	0.0
Queue Length 50th (ft)	9	~222	0	~67	152	0	8	67	0	~257	156	0
Queue Length 95th (ft)	31	#386	0	#165	#301	54	20	#142	0	#451	#298	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	125	498	621	125	498	690	358	310	495	667	758	742
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	1.07	0.14	1.19	0.88	0.53	0.13	0.64	0.25	1.15	0.63	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	529	88	148	436	359	48	195	124	760	475	21
Future Volume (veh/h)	33	529	88	148	436	359	48	195	124	760	475	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	534	89	149	440	363	48	197	125	768	480	21
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	148	500	423	120	500	423	374	312	264	662	697	590
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.26	0.37	0.37
Sat Flow, veh/h	683	1885	1598	808	1885	1598	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	534	89	149	440	363	48	197	125	768	480	21
Grp Sat Flow(s),veh/h/ln	683	1885	1598	808	1885	1598	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.5	15.9	2.6	0.0	13.4	13.0	1.3	5.9	4.3	15.8	13.0	0.5
Cycle Q Clear(g_c), s	15.9	15.9	2.6	15.9	13.4	13.0	1.3	5.9	4.3	15.8	13.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	500	423	120	500	423	374	312	264	662	697	590
V/C Ratio(X)	0.22	1.07	0.21	1.24	0.88	0.86	0.13	0.63	0.47	1.16	0.69	0.04
Avail Cap(c_a), veh/h	148	500	423	120	500	423	468	312	264	662	697	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	22.0	17.2	30.0	21.1	21.0	18.2	23.3	22.6	15.7	15.9	12.0
Incr Delay (d2), s/veh	1.6	59.9	0.5	160.9	17.5	17.1	0.2	4.1	1.3	88.4	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	14.2	0.9	6.9	7.4	6.1	0.5	2.6	1.5	21.9	5.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	82.0	17.7	190.9	38.6	38.1	18.4	27.4	23.9	104.1	18.8	12.0
LnGrp LOS	C	F	B	F	D	D	B	C	C	F	B	B
Approach Vol, veh/h		656			952			370			1269	
Approach Delay, s/veh		70.7			62.2			25.0			70.3	
Approach LOS		E			E			C			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.7	28.1		22.2	22.0	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		17.9	3.3	15.0		17.9	17.8	7.9				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.0	0.0	0.3				

Intersection Summary												
HCM 6th Ctrl Delay			62.9									
HCM 6th LOS			E									

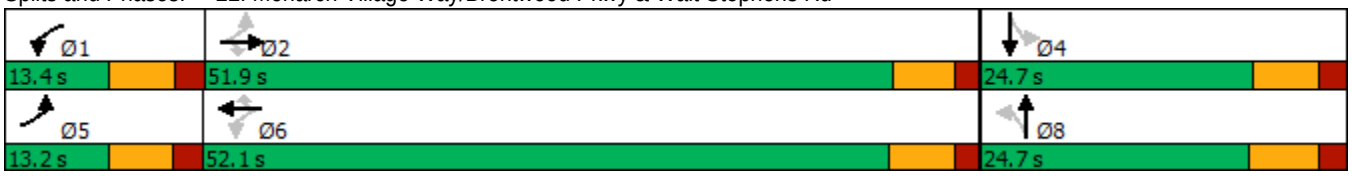
Notes

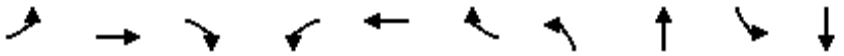
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	83	1131	102	46	750	115	82	15	87	15
Future Volume (vph)	83	1131	102	46	750	115	82	15	87	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	51.9	51.9	13.4	52.1	52.1	24.7	24.7	24.7	24.7
Total Split (%)	14.7%	57.7%	57.7%	14.9%	57.9%	57.9%	27.4%	27.4%	27.4%	27.4%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	53.6	51.4	51.4	52.1	48.4	48.4	11.7	11.7	11.9	11.9
Actuated g/C Ratio	0.69	0.66	0.66	0.67	0.62	0.62	0.15	0.15	0.15	0.15
v/c Ratio	0.20	0.92	0.09	0.18	0.65	0.11	0.42	0.23	0.44	0.26
Control Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
LOS	A	C	A	A	B	A	D	B	D	B
Approach Delay		28.4			14.7			28.3		27.3
Approach LOS		C			B			C		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 90.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd



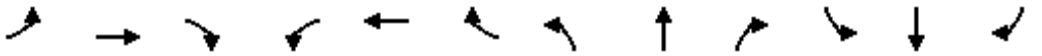


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	1142	103	46	758	116	83	68	88	79
v/c Ratio	0.20	0.92	0.09	0.18	0.65	0.11	0.42	0.23	0.44	0.26
Control Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
Queue Length 50th (ft)	11	~674	0	6	269	0	41	7	43	7
Queue Length 95th (ft)	28	#992	18	18	468	23	84	42	88	45
Internal Link Dist (ft)		2243			4129			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	418	1240	1095	251	1240	1095	307	425	315	437
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.92	0.09	0.18	0.61	0.11	0.27	0.16	0.28	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1131	102	46	750	115	82	15	52	87	15	63
Future Volume (veh/h)	83	1131	102	46	750	115	82	15	52	87	15	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1142	103	46	758	116	83	15	53	88	15	64
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	387	1078	913	190	1049	889	208	48	171	218	41	177
Arrive On Green	0.07	0.57	0.57	0.06	0.56	0.56	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1795	1885	1598	1795	1885	1598	1320	362	1278	1333	310	1322
Grp Volume(v), veh/h	84	1142	103	46	758	116	83	0	68	88	0	79
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	1885	1598	1320	0	1640	1333	0	1632
Q Serve(g_s), s	1.5	46.0	2.4	0.8	24.0	2.8	4.9	0.0	3.0	5.1	0.0	3.5
Cycle Q Clear(g_c), s	1.5	46.0	2.4	0.8	24.0	2.8	8.5	0.0	3.0	8.2	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.81
Lane Grp Cap(c), veh/h	387	1078	913	190	1049	889	208	0	220	218	0	219
V/C Ratio(X)	0.22	1.06	0.11	0.24	0.72	0.13	0.40	0.00	0.31	0.40	0.00	0.36
Avail Cap(c_a), veh/h	411	1078	913	246	1078	913	327	0	367	343	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	17.2	7.9	18.7	13.2	8.5	35.6	0.0	31.5	35.2	0.0	31.7
Incr Delay (d2), s/veh	0.1	44.7	0.1	0.2	3.0	0.1	1.2	0.0	0.8	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	28.5	0.7	0.4	8.9	0.8	1.6	0.0	1.2	1.7	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	61.9	8.0	18.9	16.2	8.7	36.8	0.0	32.3	36.4	0.0	32.7
LnGrp LOS	B	F	A	B	B	A	D	A	C	D	A	C
Approach Vol, veh/h		1329			920			151			167	
Approach Delay, s/veh		54.5			15.4			34.8			34.6	
Approach LOS		D			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	52.1		17.5	12.1	50.9		17.5				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 46		* 18	7.0	* 46		18.0				
Max Q Clear Time (g_c+I1), s	2.8	48.0		10.2	3.5	26.0		10.5				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	9.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		38.0	
HCM 6th LOS		D	

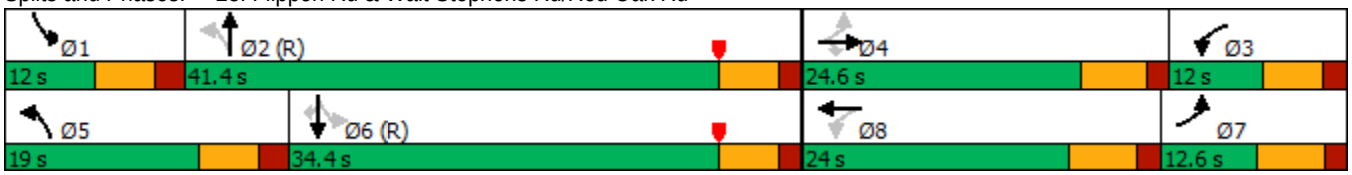
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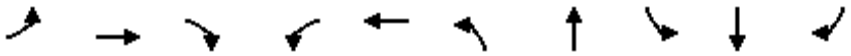
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	390	397	723	48	217	510	446	60	640	364
Future Volume (vph)	390	397	723	48	217	510	446	60	640	364
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	27.2	23.4	23.4	22.7	16.3	47.4	38.2	34.4	28.8	28.8
Actuated g/C Ratio	0.30	0.26	0.26	0.25	0.18	0.53	0.42	0.38	0.32	0.32
v/c Ratio	1.30	0.88	1.20	0.25	0.80	1.60	0.67	0.21	1.14	0.52
Control Delay	187.6	55.4	124.9	26.9	52.3	304.1	11.6	13.4	114.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.6	55.4	124.9	26.9	52.3	304.1	11.6	13.4	114.2	6.8
LOS	F	E	F	C	D	F	B	B	F	A
Approach Delay		122.8			48.2		161.3		71.7	
Approach LOS		F			D		F		E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay: 112.8	Intersection LOS: F
Intersection Capacity Utilization 116.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





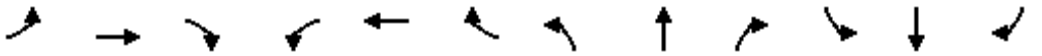
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	419	427	777	52	273	548	523	65	688	391
v/c Ratio	1.30	0.88	1.20	0.25	0.80	1.60	0.67	0.21	1.14	0.52
Control Delay	187.6	55.4	124.9	26.9	52.3	304.1	11.6	13.4	114.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.6	55.4	124.9	26.9	52.3	304.1	11.6	13.4	114.2	6.8
Queue Length 50th (ft)	~251	~278	~431	20	142	~385	114	17	~463	16
Queue Length 95th (ft)	#429	#458	#655	45	#253	m#436	m158	37	#674	86
Internal Link Dist (ft)		2158			3175		1869		1419	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	322	488	648	208	373	343	784	304	601	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.88	1.20	0.25	0.73	1.60	0.67	0.21	1.14	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	397	723	48	217	37	510	446	40	60	640	364
Future Volume (veh/h)	390	397	723	48	217	37	510	446	40	60	640	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	419	427	777	52	233	40	548	480	43	65	688	391
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	258	390	330	167	269	46	337	724	65	355	635	538
Arrive On Green	0.08	0.21	0.21	0.05	0.17	0.17	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	1795	1885	1598	1795	1568	269	1781	1692	152	1795	1885	1598
Grp Volume(v), veh/h	419	427	777	52	0	273	548	0	523	65	688	391
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	0	1837	1781	0	1843	1795	1885	1598
Q Serve(g_s), s	7.4	18.6	12.1	0.0	0.0	13.0	13.0	0.0	20.4	2.1	30.3	13.1
Cycle Q Clear(g_c), s	7.4	18.6	12.1	0.0	0.0	13.0	13.0	0.0	20.4	2.1	30.3	13.1
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	258	390	330	167	0	315	337	0	789	355	635	538
V/C Ratio(X)	1.62	1.10	2.35	0.31	0.00	0.87	1.62	0.00	0.66	0.18	1.08	0.73
Avail Cap(c_a), veh/h	258	390	330	204	0	365	337	0	789	378	635	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	35.7	15.1	40.7	0.0	36.3	26.4	0.0	20.6	18.2	29.8	12.1
Incr Delay (d2), s/veh	281.7	47.5	609.8	1.0	0.0	17.5	282.3	0.0	0.4	0.2	60.2	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.6	13.1	60.0	1.1	0.0	7.2	31.4	0.0	7.9	0.8	23.1	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	321.3	83.2	624.9	41.8	0.0	53.8	308.7	0.0	21.0	18.5	90.0	20.4
LnGrp LOS	F	F	F	D	A	D	F	A	C	B	F	C
Approach Vol, veh/h		1623			325			1071			1144	
Approach Delay, s/veh		404.0			51.9			168.2			62.1	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	44.1	10.5	24.6	19.0	35.9	13.5	21.5
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	4.1	22.4	2.0	20.6	15.0	32.3	9.4	15.0
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary		
HCM 6th Ctrl Delay		221.9
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	2	172	3	7	702	177	398	969	9
Future Volume (vph)	5	2	172	3	7	702	177	398	969	9
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	15.0	15.0	10.0	15.0	10.0	15.0	15.0	10.0	15.0	15.0
Minimum Split (s)	20.0	20.0	16.0	20.0	15.0	20.0	20.0	15.0	20.0	20.0
Total Split (s)	20.0	20.0	16.0	36.0	15.0	39.0	39.0	15.0	39.0	39.0
Total Split (%)	22.2%	22.2%	17.8%	40.0%	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		15.0	18.4	18.4	44.0	34.0	34.0	60.8	58.6	58.6
Actuated g/C Ratio		0.17	0.20	0.20	0.49	0.38	0.38	0.68	0.65	0.65
v/c Ratio		0.03	0.51	0.52	0.02	1.03	0.26	0.76	0.83	0.01
Control Delay		28.7	36.2	6.9	8.0	71.1	6.5	26.7	10.8	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	36.2	6.9	8.0	71.1	6.5	26.7	10.8	0.0
LOS		C	D	A	A	E	A	C	B	A
Approach Delay		28.7		18.1		57.7			15.3	
Approach LOS		C		B		E			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 29.6	Intersection LOS: C
Intersection Capacity Utilization 89.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Flippen Rd & Village Way/Banks Rd





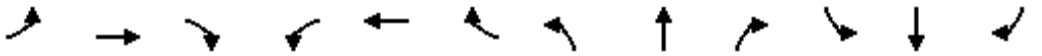
Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	179	289	7	731	184	415	1009	9
v/c Ratio	0.03	0.51	0.52	0.02	1.03	0.26	0.76	0.83	0.01
Control Delay	28.7	36.2	6.9	8.0	71.1	6.5	26.7	10.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	36.2	6.9	8.0	71.1	6.5	26.7	10.8	0.0
Queue Length 50th (ft)	3	95	1	1	~449	14	125	47	0
Queue Length 95th (ft)	17	127	54	8	#664	57	m#193	m#605	m0
Internal Link Dist (ft)	121		2635		622			1869	
Turn Bay Length (ft)		90		140		165	125		190
Base Capacity (vph)	308	356	745	296	710	700	545	1213	1102
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.50	0.39	0.02	1.03	0.26	0.76	0.83	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	2	172	3	275	7	702	177	398	969	9
Future Volume (veh/h)	5	2	2	172	3	275	7	702	177	398	969	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1870	1900
Adj Flow Rate, veh/h	5	2	2	179	3	286	7	731	184	415	1009	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	0	2	0
Cap, veh/h	62	6	2	338	4	352	223	946	808	396	1113	958
Arrive On Green	0.03	0.03	0.03	0.13	0.22	0.22	0.02	0.50	0.50	0.15	0.79	0.79
Sat Flow, veh/h	0	186	53	1810	17	1596	1810	1885	1610	1810	1870	1610
Grp Volume(v), veh/h	9	0	0	179	0	289	7	731	184	415	1009	9
Grp Sat Flow(s),veh/h/ln	239	0	0	1810	0	1613	1810	1885	1610	1810	1870	1610
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	15.3	0.2	28.4	3.0	10.0	35.9	0.1
Cycle Q Clear(g_c), s	3.0	0.0	0.0	3.0	0.0	15.3	0.2	28.4	3.0	10.0	35.9	0.1
Prop In Lane	0.56		0.22	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	0	0	338	0	356	223	946	808	396	1113	958
V/C Ratio(X)	0.13	0.00	0.00	0.53	0.00	0.81	0.03	0.77	0.23	1.05	0.91	0.01
Avail Cap(c_a), veh/h	246	0	0	338	0	555	392	946	808	396	1113	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	42.5	0.0	0.0	34.4	0.0	33.3	14.7	18.2	3.3	17.3	7.5	3.8
Incr Delay (d2), s/veh	1.7	0.0	0.0	2.1	0.0	9.6	0.1	6.1	0.7	27.9	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.6	0.0	6.7	0.1	12.2	1.9	6.7	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	0.0	36.4	0.0	42.9	14.7	24.4	4.0	45.2	8.9	3.8
LnGrp LOS	D	A	A	D	A	D	B	C	A	F	A	A
Approach Vol, veh/h		9			468			922			1433	
Approach Delay, s/veh		44.2			40.4			20.2			19.4	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	50.2	16.8	8.0	6.6	58.6		24.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	34.0	11.0	15.0	10.0	34.0		31.0				
Max Q Clear Time (g_c+I1), s	12.0	30.4	5.0	5.0	2.2	37.9		17.3				
Green Ext Time (p_c), s	0.0	2.5	0.4	0.0	0.0	0.0		2.5				

Intersection Summary			
HCM 6th Ctrl Delay		23.2	
HCM 6th LOS		C	

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	492	371	54	60	54
Future Vol, veh/h	48	492	371	54	60	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	529	399	58	65	58

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	457	0	-	0	1061	428
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	633	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1104	-	-	-	248	627
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1104	-	-	-	231	627
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	529	-

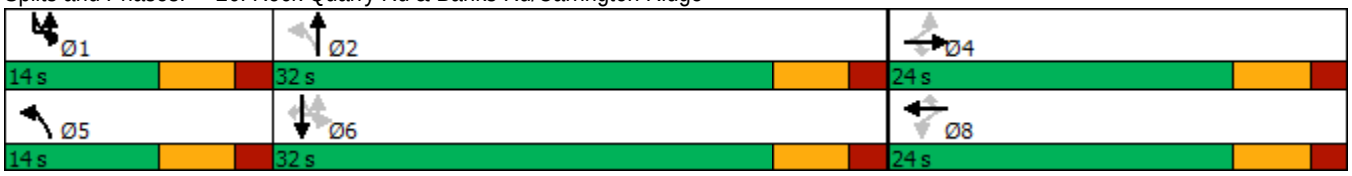
Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	22.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1104	-	-	-	330
HCM Lane V/C Ratio	0.047	-	-	-	0.371
HCM Control Delay (s)	8.4	0	-	-	22.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	25	386	24	15	8	304	728	14	788	103
Future Volume (vph)	89	25	386	24	15	8	304	728	14	788	103
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	6.0	15.0	6.0	15.0	15.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	24.0	14.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	14.0	32.0	14.0	32.0	32.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	20.0%	45.7%	20.0%	45.7%	45.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)		11.9	11.9		11.9	11.9	36.2	34.8	28.8	22.7	22.7
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.59	0.57	0.47	0.37	0.37
v/c Ratio		0.44	0.72		0.14	0.02	0.74	0.39	0.03	0.62	0.16
Control Delay		27.7	15.0		22.0	0.1	21.4	9.5	6.6	18.3	2.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		27.7	15.0		22.0	0.1	21.4	9.5	6.6	18.3	2.4
LOS		C	B		C	A	C	A	A	B	A
Approach Delay		17.9			18.5			12.9		16.3	
Approach LOS		B			B			B		B	

Intersection Summary		
Cycle Length: 70		
Actuated Cycle Length: 61		
Natural Cycle: 65		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.74		
Intersection Signal Delay: 15.2	Intersection LOS: B	
Intersection Capacity Utilization 67.3%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 26: Rock Quarry Rd & Banks Rd/Carrington Ridge

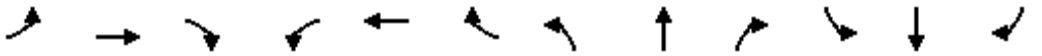




Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	119	402	41	8	317	791	15	821	107
v/c Ratio	0.44	0.72	0.14	0.02	0.74	0.39	0.03	0.62	0.16
Control Delay	27.7	15.0	22.0	0.1	21.4	9.5	6.6	18.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	15.0	22.0	0.1	21.4	9.5	6.6	18.3	2.4
Queue Length 50th (ft)	41	34	13	0	47	64	2	122	0
Queue Length 95th (ft)	85	117	36	0	#188	185	10	204	18
Internal Link Dist (ft)	1722		273			625		1560	
Turn Bay Length (ft)		585		110	195		135		
Base Capacity (vph)	417	693	436	581	428	2010	489	1545	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.58	0.09	0.01	0.74	0.39	0.03	0.53	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	25	386	24	15	8	304	728	32	14	788	103
Future Volume (veh/h)	89	25	386	24	15	8	304	728	32	14	788	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	93	26	402	25	16	8	317	758	33	15	821	107
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	1	2	2	0	1	0
Cap, veh/h	98	16	442	88	37	442	407	1487	65	337	1176	529
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.43	0.43	0.02	0.33	0.33
Sat Flow, veh/h	0	59	1610	0	135	1610	1795	3469	151	1810	3582	1610
Grp Volume(v), veh/h	119	0	402	41	0	8	317	388	403	15	821	107
Grp Sat Flow(s),veh/h/ln	59	0	1610	135	0	1610	1795	1777	1843	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	15.8	0.0	0.0	0.2	7.3	10.5	10.5	0.4	13.1	3.1
Cycle Q Clear(g_c), s	18.0	0.0	15.8	18.0	0.0	0.2	7.3	10.5	10.5	0.4	13.1	3.1
Prop In Lane	0.78		1.00	0.61		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	114	0	442	126	0	442	407	761	790	337	1176	529
V/C Ratio(X)	1.04	0.00	0.91	0.33	0.00	0.02	0.78	0.51	0.51	0.04	0.70	0.20
Avail Cap(c_a), veh/h	114	0	442	126	0	442	407	761	790	518	1422	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	23.0	19.7	0.0	17.3	13.9	13.7	13.7	14.1	19.2	15.8
Incr Delay (d2), s/veh	96.2	0.0	22.4	1.5	0.0	0.0	8.9	1.2	1.1	0.0	1.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	8.4	0.5	0.0	0.1	3.3	3.6	3.8	0.1	4.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.4	0.0	45.4	21.2	0.0	17.3	22.8	14.8	14.8	14.1	21.1	16.2
LnGrp LOS	F	A	D	C	A	B	C	B	B	B	C	B
Approach Vol, veh/h		521			49			1108			943	
Approach Delay, s/veh		63.9			20.6			17.1			20.4	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	34.1		24.0	14.0	27.5		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	26.0		18.0	8.0	26.0		18.0				
Max Q Clear Time (g_c+I1), s	2.4	12.5		20.0	9.3	15.1		20.0				
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	6.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		27.7	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	229	1	111	5	0	2	70	758	4	2	784	152
Future Vol, veh/h	229	1	111	5	0	2	70	758	4	2	784	152
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	175	0	-	165
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	0	0	0	2	2	0	0	2	2
Mvmt Flow	241	1	117	5	0	2	74	798	4	2	825	160

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1376	1779	413	1363	-	399	985	0	0	802	0	0
Stage 1	829	829	-	946	-	-	-	-	-	-	-	-
Stage 2	547	950	-	417	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.5	6.94	7.5	-	6.9	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	6.54	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4	3.32	3.5	-	3.3	2.22	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 104	83	588	109	0	606	697	-	-	830	-	-
Stage 1	331	388	-	285	0	-	-	-	-	-	-	-
Stage 2	489	341	-	589	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 95	74	588	79	-	606	697	-	-	830	-	-
Mov Cap-2 Maneuver	~ 95	74	-	79	-	-	-	-	-	-	-	-
Stage 1	296	387	-	255	-	-	-	-	-	-	-	-
Stage 2	436	305	-	470	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	11	0.9	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	697	-	-	588	606	830	-	-
HCM Lane V/C Ratio	0.106	-	-	0.199	0.003	0.003	-	-
HCM Control Delay (s)	10.8	-	-	12.6	11	9.3	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.7	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	19
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	152	310	22	7	193	26	11	66	12	14	88	92
Future Vol, veh/h	152	310	22	7	193	26	11	66	12	14	88	92
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	5	0	0	1	5	0	0	0	0	0	0
Mvmt Flow	169	344	24	8	214	29	12	73	13	16	98	102
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	26.3	12.4	11	12.4
HCM LOS	D	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	31%	3%	7%
Vol Thru, %	74%	64%	85%	45%
Vol Right, %	13%	5%	12%	47%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	484	226	194
LT Vol	11	152	7	14
Through Vol	66	310	193	88
RT Vol	12	22	26	92
Lane Flow Rate	99	538	251	216
Geometry Grp	1	1	1	1
Degree of Util (X)	0.18	0.798	0.395	0.357
Departure Headway (Hd)	6.554	5.341	5.66	5.954
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	551	672	630	599
Service Time	4.554	3.407	3.745	4.042
HCM Lane V/C Ratio	0.18	0.801	0.398	0.361
HCM Control Delay	11	26.3	12.4	12.4
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	0.7	8	1.9	1.6

Intersection	
Intersection Delay, s/veh	132.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	165	616	73	14	453	92	54	5	22	92	11	139
Future Vol, veh/h	165	616	73	14	453	92	54	5	22	92	11	139
Peak Hour Factor	0.90	0.90	0.90	0.94	0.90	0.94	0.90	0.94	0.94	0.94	0.94	0.90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	183	684	81	15	503	98	60	5	23	98	12	154
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	186.7	113.2	14.8	19.9
HCM LOS	F	F	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	67%	100%	0%	100%	0%	38%
Vol Thru, %	6%	0%	89%	0%	83%	5%
Vol Right, %	27%	0%	11%	0%	17%	57%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	165	689	14	545	242
LT Vol	54	165	0	14	0	92
Through Vol	5	0	616	0	453	11
RT Vol	22	0	73	0	92	139
Lane Flow Rate	89	183	766	15	601	264
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.205	0.374	1.438	0.031	1.153	0.533
Departure Headway (Hd)	9.377	7.686	7.095	8.136	7.464	8.074
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	471	521	443	493	449
Service Time	7.377	5.386	4.795	5.836	5.164	6.074
HCM Lane V/C Ratio	0.231	0.389	1.47	0.034	1.219	0.588
HCM Control Delay	14.8	14.9	227.9	11.1	115.7	19.9
HCM Lane LOS	B	B	F	B	F	C
HCM 95th-tile Q	0.8	1.7	35.5	0.1	19.8	3.1

Intersection	
Int Delay, s/veh	18.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	0	10	13	0	67	11	779	16	89	1035	30
Future Vol, veh/h	32	0	10	13	0	67	11	779	16	89	1035	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	1	1	0
Mvmt Flow	36	0	11	14	0	74	12	866	18	99	1150	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2284	2256	1150	2260	2271	866	1183	0	0	884	0	0
Stage 1	1348	1348	-	890	890	-	-	-	-	-	-	-
Stage 2	936	908	-	1370	1381	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 28	42	244	29	41	353	597	-	-	770	-	-
Stage 1	188	221	-	337	364	-	-	-	-	-	-	-
Stage 2	321	357	-	181	213	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 20	36	244	25	35	353	597	-	-	770	-	-
Mov Cap-2 Maneuver	~ 20	36	-	25	35	-	-	-	-	-	-	-
Stage 1	184	192	-	330	357	-	-	-	-	-	-	-
Stage 2	248	350	-	151	186	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 701.5	105.4	0.2	0.8
HCM LOS	F	F		

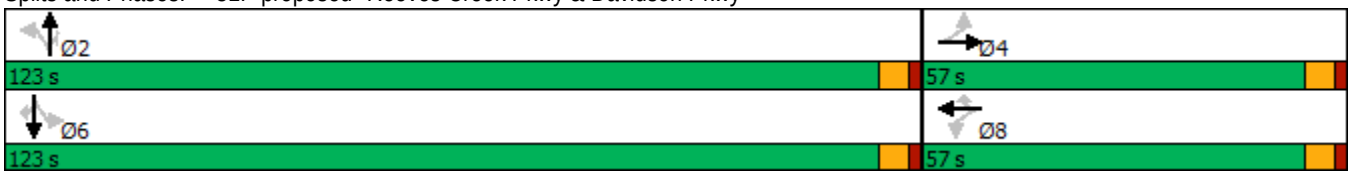
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	597	-	-	26	113	770	-	-
HCM Lane V/C Ratio	0.02	-	-	1.795	0.787	0.128	-	-
HCM Control Delay (s)	11.2	-	-	$ 701.5	105.4	10.4	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.7	4.5	0.4	-	-

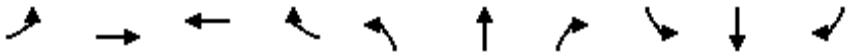
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	176	71	296	57	292	19	1056	360	424	645	142
Future Volume (vph)	176	71	296	57	292	19	1056	360	424	645	142
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8			2			6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	4	4	8	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	57.0	57.0	57.0	57.0	57.0	123.0	123.0	123.0	123.0	123.0	123.0
Total Split (%)	31.7%	31.7%	31.7%	31.7%	31.7%	68.3%	68.3%	68.3%	68.3%	68.3%	68.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	51.0	51.0		51.0	51.0	117.0	117.0	117.0	117.0	117.0	117.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.65	0.65	0.65	0.65	0.65	0.65
v/c Ratio	1.68	0.20		1.10	0.61	0.06	0.95	0.36	11.21	0.58	0.14
Control Delay	375.5	45.5		135.9	43.5	12.2	45.3	7.0	4648.1	20.1	2.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	375.5	45.5		135.9	43.5	12.2	45.3	7.0	4648.1	20.1	2.6
LOS	F	D		F	D	B	D	A	F	C	A
Approach Delay		259.7		94.1			35.2			1637.5	
Approach LOS		F		F			D			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 11.21	
Intersection Signal Delay: 607.9	Intersection LOS: F
Intersection Capacity Utilization 120.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & Davidson Pkwy



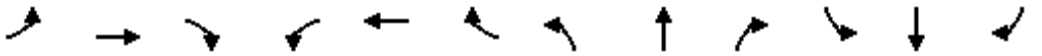


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	106	392	324	21	1173	400	471	717	158
v/c Ratio	1.68	0.20	1.10	0.61	0.06	0.95	0.36	11.21	0.58	0.14
Control Delay	375.5	45.5	135.9	43.5	12.2	45.3	7.0	4648.1	20.1	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	375.5	45.5	135.9	43.5	12.2	45.3	7.0	4648.1	20.1	2.6
Queue Length 50th (ft)	~335	87	~524	234	9	1214	86	~1061	456	8
Queue Length 95th (ft)	#514	144	#749	349	22	#1627	145	#1301	575	36
Internal Link Dist (ft)		316	796			651			1270	
Turn Bay Length (ft)										
Base Capacity (vph)	117	525	355	529	337	1235	1124	42	1235	1098
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.68	0.20	1.10	0.61	0.06	0.95	0.36	11.21	0.58	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	71	24	296	57	292	19	1056	360	424	645	142
Future Volume (veh/h)	176	71	24	296	57	292	19	1056	360	424	645	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	196	79	27	329	63	324	21	1173	400	471	717	158
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	40	384	131	313	53	456	322	1235	1047	68	1235	1047
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1012	1354	463	975	187	1610	644	1900	1610	331	1900	1610
Grp Volume(v), veh/h	196	0	106	392	0	324	21	1173	400	471	717	158
Grp Sat Flow(s),veh/h/ln	1012	0	1817	1161	0	1610	644	1900	1610	331	1900	1610
Q Serve(g_s), s	0.0	0.0	8.0	43.0	0.0	32.5	3.4	101.6	20.8	15.4	38.2	6.9
Cycle Q Clear(g_c), s	51.0	0.0	8.0	51.0	0.0	32.5	41.6	101.6	20.8	117.0	38.2	6.9
Prop In Lane	1.00		0.25	0.84		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	0	515	366	0	456	322	1235	1047	68	1235	1047
V/C Ratio(X)	4.90	0.00	0.21	1.07	0.00	0.71	0.07	0.95	0.38	6.90	0.58	0.15
Avail Cap(c_a), veh/h	40	0	515	366	0	456	322	1235	1047	68	1235	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	90.0	0.0	49.1	70.7	0.0	57.9	29.4	28.8	14.7	86.8	17.7	12.2
Incr Delay (d2), s/veh	1809.8	0.0	0.2	67.4	0.0	5.1	0.4	16.1	1.1	2685.7	2.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.0	0.0	3.8	24.0	0.0	13.9	0.6	48.3	7.7	54.1	16.7	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1899.8	0.0	49.3	138.0	0.0	62.9	29.8	44.9	15.7	2772.5	19.7	12.5
LnGrp LOS	F	A	D	F	A	E	C	D	B	F	B	B
Approach Vol, veh/h		302			716			1594			1346	
Approach Delay, s/veh		1250.3			104.1			37.4			982.1	
Approach LOS		F			F			D			F	

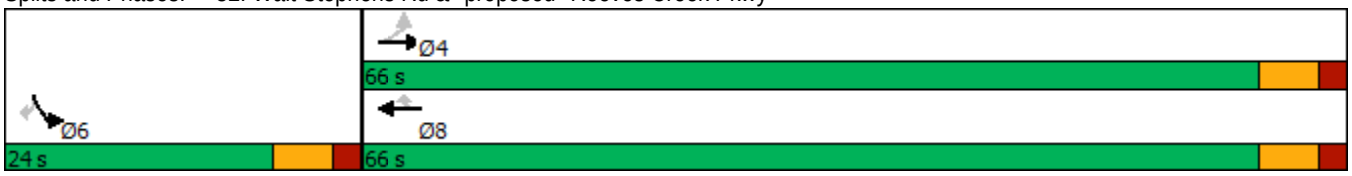
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		123.0		57.0		123.0		57.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		117.0		51.0		117.0		51.0				
Max Q Clear Time (g_c+I1), s		103.6		53.0		119.0		53.0				
Green Ext Time (p_c), s		8.6		0.0		0.0		0.0				

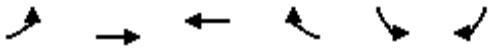
Intersection Summary												
HCM 6th Ctrl Delay			463.3									
HCM 6th LOS			F									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	127	1184	913	177	325	201
Future Volume (vph)	127	1184	913	177	325	201
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	66.0	66.0	66.0	66.0	24.0	24.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	60.0	60.0	60.0	60.0	18.0	18.0
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.20	0.20
v/c Ratio	0.83	1.04	0.80	0.17	1.00	0.51
Control Delay	52.8	53.4	17.0	1.2	85.6	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	53.4	17.0	1.2	85.6	16.3
LOS	D	D	B	A	F	B
Approach Delay		53.3	14.4		59.1	
Approach LOS		D	B		E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 32: Walt Stephens Rd & *proposed* Reeves Creek Pkwy



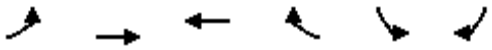


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	141	1316	1014	197	361	223
v/c Ratio	0.83	1.04	0.80	0.17	1.00	0.51
Control Delay	52.8	53.4	17.0	1.2	85.6	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	53.4	17.0	1.2	85.6	16.3
Queue Length 50th (ft)	52	~816	363	0	207	37
Queue Length 95th (ft)	#184	#1065	558	20	#385	104
Internal Link Dist (ft)		4129	2158		943	
Turn Bay Length (ft)						
Base Capacity (vph)	170	1266	1266	1142	361	440
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	1.04	0.80	0.17	1.00	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	127	1184	913	177	325	201
Future Volume (veh/h)	127	1184	913	177	325	201
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	1316	1014	197	361	223
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	214	1267	1267	1073	362	322
Arrive On Green	0.67	0.67	0.67	0.67	0.20	0.20
Sat Flow, veh/h	469	1900	1900	1610	1810	1610
Grp Volume(v), veh/h	141	1316	1014	197	361	223
Grp Sat Flow(s),veh/h/ln	469	1900	1900	1610	1810	1610
Q Serve(g_s), s	25.7	60.0	34.3	4.2	17.9	11.6
Cycle Q Clear(g_c), s	60.0	60.0	34.3	4.2	17.9	11.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	214	1267	1267	1073	362	322
V/C Ratio(X)	0.66	1.04	0.80	0.18	1.00	0.69
Avail Cap(c_a), veh/h	214	1267	1267	1073	362	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	15.0	10.7	5.7	36.0	33.4
Incr Delay (d2), s/veh	7.3	36.0	3.8	0.1	46.7	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	30.7	11.7	1.1	12.1	5.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	51.0	14.5	5.8	82.7	45.0
LnGrp LOS	D	F	B	A	F	D
Approach Vol, veh/h		1457	1211		584	
Approach Delay, s/veh		49.9	13.1		68.3	
Approach LOS		D	B		E	

Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			66.0		24.0	66.0
Change Period (Y+Rc), s			6.0		6.0	6.0
Max Green Setting (Gmax), s			60.0		18.0	60.0
Max Q Clear Time (g_c+I1), s			62.0		19.9	36.3
Green Ext Time (p_c), s			0.0		0.0	8.9

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	9.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	0	21	25	0	2	25	807	41	2	1028	32
Future Vol, veh/h	27	0	21	25	0	2	25	807	41	2	1028	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	30	0	23	28	0	2	28	897	46	2	1142	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2123	2145	1142	2129	2135	897	1178	0	0	943	0	0
Stage 1	1146	1146	-	953	953	-	-	-	-	-	-	-
Stage 2	977	999	-	1176	1182	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	37	49	246	37	50	341	600	-	-	736	-	-
Stage 1	245	276	-	314	340	-	-	-	-	-	-	-
Stage 2	304	324	-	235	266	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	46	246	32	47	341	600	-	-	736	-	-
Mov Cap-2 Maneuver	35	46	-	32	47	-	-	-	-	-	-	-
Stage 1	233	274	-	299	324	-	-	-	-	-	-	-
Stage 2	288	309	-	211	264	-	-	-	-	-	-	-

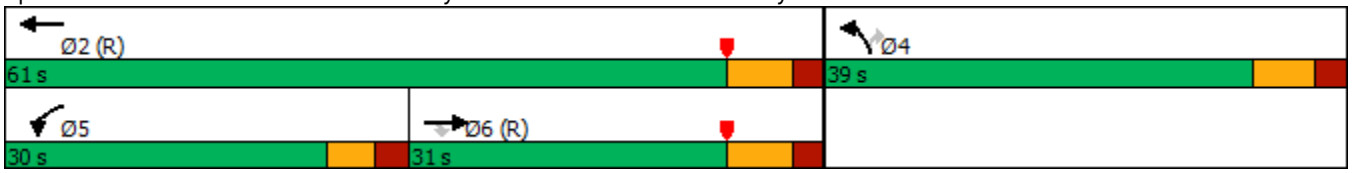
Approach	EB	WB	NB	SB
HCM Control Delay, s	224.9	291.2	0.3	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	600	-	-	56	34	736	-	-
HCM Lane V/C Ratio	0.046	-	-	0.952	0.882	0.003	-	-
HCM Control Delay (s)	11.3	-	-	224.9	291.2	9.9	0	-
HCM Lane LOS	B	-	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.3	3.1	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	702	467	522	1190	589	369
Future Volume (vph)	702	467	522	1190	589	369
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	31.0	31.0	30.0	61.0	39.0	39.0
Total Split (%)	31.0%	31.0%	30.0%	61.0%	39.0%	39.0%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	28.0	28.0	22.5	56.6	29.0	29.0
Actuated g/C Ratio	0.28	0.28	0.22	0.57	0.29	0.29
v/c Ratio	0.94	0.50	0.85	0.75	0.79	0.42
Control Delay	57.3	4.8	50.0	20.4	40.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	4.8	50.0	20.4	40.1	4.1
LOS	E	A	D	C	D	A
Approach Delay	36.3			29.5	26.3	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 68.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	763	508	567	1293	640	401
v/c Ratio	0.94	0.50	0.85	0.75	0.79	0.42
Control Delay	57.3	4.8	50.0	20.4	40.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	4.8	50.0	20.4	40.1	4.1
Queue Length 50th (ft)	~286	0	174	321	187	0
Queue Length 95th (ft)	#412	44	#245	424	249	35
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	814	1007	711	1731	893	998
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.50	0.80	0.75	0.72	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	702	467	522	1190	589	369
Future Volume (veh/h)	702	467	522	1190	589	369
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	763	508	567	1293	640	401
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	915	718	636	1811	770	621
Arrive On Green	0.31	0.31	0.21	0.58	0.27	0.27
Sat Flow, veh/h	3011	2303	3018	3185	2826	2281
Grp Volume(v), veh/h	763	508	567	1293	640	401
Grp Sat Flow(s),veh/h/ln	1467	1152	1509	1552	1413	1141
Q Serve(g_s), s	24.2	19.5	18.3	29.7	21.3	15.5
Cycle Q Clear(g_c), s	24.2	19.5	18.3	29.7	21.3	15.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	915	718	636	1811	770	621
V/C Ratio(X)	0.83	0.71	0.89	0.71	0.83	0.65
Avail Cap(c_a), veh/h	915	718	721	1811	901	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	30.4	38.3	14.9	34.2	32.1
Incr Delay (d2), s/veh	8.8	5.8	12.3	2.4	6.4	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	5.5	7.5	9.5	7.4	9.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.8	36.2	50.7	17.3	40.6	34.1
LnGrp LOS	D	D	D	B	D	C
Approach Vol, veh/h	1271			1860	1041	
Approach Delay, s/veh	39.0			27.5	38.1	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.7		34.3	27.2	38.5
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 54		31.9	23.9	* 24
Max Q Clear Time (g_c+I1), s		31.7		23.3	20.3	26.2
Green Ext Time (p_c), s		15.1		3.9	0.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

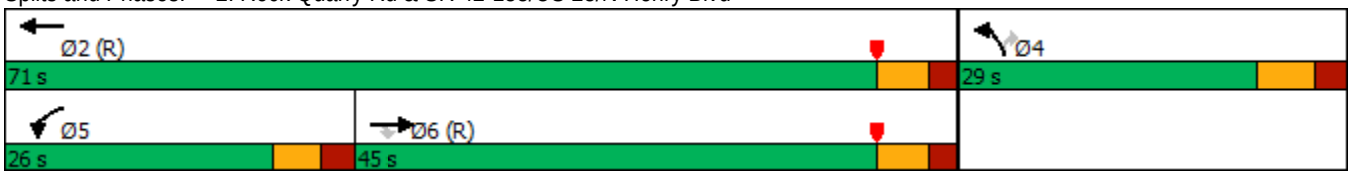
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	970	251	550	1565	196	469
Future Volume (vph)	970	251	550	1565	196	469
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	45.0	45.0	26.0	71.0	29.0	29.0
Total Split (%)	45.0%	45.0%	26.0%	71.0%	29.0%	29.0%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	40.7	40.7	20.3	67.0	20.0	20.0
Actuated g/C Ratio	0.41	0.41	0.20	0.67	0.20	0.20
v/c Ratio	0.59	0.33	0.83	0.84	0.30	0.52
Control Delay	23.9	6.2	49.4	17.9	35.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	6.2	49.4	17.9	35.5	5.3
LOS	C	A	D	B	D	A
Approach Delay	20.3			26.1	14.2	
Approach LOS	C			C	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 70.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1021	264	579	1647	206	494
v/c Ratio	0.59	0.33	0.83	0.84	0.30	0.52
Control Delay	23.9	6.2	49.4	17.9	35.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	6.2	49.4	17.9	35.5	5.3
Queue Length 50th (ft)	173	13	180	374	58	0
Queue Length 95th (ft)	298	68	240	496	91	45
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	1717	801	725	1950	758	1000
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.33	0.80	0.84	0.27	0.49

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	970	251	550	1565	196	469
Future Volume (veh/h)	970	251	550	1565	196	469
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	1021	264	579	1647	206	494
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	1788	666	644	1956	703	568
Arrive On Green	0.14	0.14	0.19	0.67	0.20	0.20
Sat Flow, veh/h	4397	1585	3456	3011	3456	2790
Grp Volume(v), veh/h	1021	264	579	1647	206	494
Grp Sat Flow(s),veh/h/ln	1419	1585	1728	1467	1728	1395
Q Serve(g_s), s	22.4	15.2	16.4	42.7	5.0	17.1
Cycle Q Clear(g_c), s	22.4	15.2	16.4	42.7	5.0	17.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1788	666	644	1956	703	568
V/C Ratio(X)	0.57	0.40	0.90	0.84	0.29	0.87
Avail Cap(c_a), veh/h	1788	666	691	1956	764	617
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	31.5	39.8	12.7	33.7	38.5
Incr Delay (d2), s/veh	1.2	1.6	13.5	4.6	0.3	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	6.7	7.8	12.0	2.1	13.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.8	33.1	53.2	17.3	34.1	51.2
LnGrp LOS	D	C	D	B	C	D
Approach Vol, veh/h	1285			2226	700	
Approach Delay, s/veh	35.3			26.6	46.2	
Approach LOS	D			C	D	

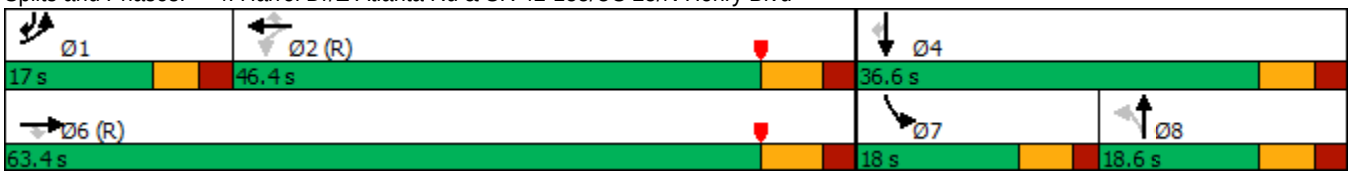
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		72.7		27.3	24.6	48.1
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		64.9		22.1	20.0	38.9
Max Q Clear Time (g_c+I1), s		44.7		19.1	18.4	24.4
Green Ext Time (p_c), s		18.2		1.2	0.3	10.3

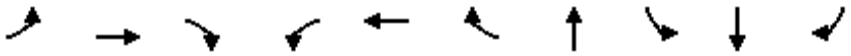
Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	288	899	88	21	1542	233	80	37	314	7	288
Future Volume (vph)	288	899	88	21	1542	233	80	37	314	7	288
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Prot	NA	pm+ov
Protected Phases	1	6			2			8	7	4	1
Permitted Phases			6	2		2	8				4
Detector Phase	1	6	6	2	2	2	8	8	7	4	1
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	5.0	8.0	6.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	19.1	14.7	14.7	11.0	14.7	12.0
Total Split (s)	17.0	63.4	63.4	46.4	46.4	46.4	18.6	18.6	18.0	36.6	17.0
Total Split (%)	17.0%	63.4%	63.4%	46.4%	46.4%	46.4%	18.6%	18.6%	18.0%	36.6%	17.0%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.0	4.2	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1	7.1		6.7	6.0	6.7	6.0
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes		Yes
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	11.0	56.3	56.3	39.3	39.3	39.3		11.9	12.0	29.9	47.6
Actuated g/C Ratio	0.11	0.56	0.56	0.39	0.39	0.39		0.12	0.12	0.30	0.48
v/c Ratio	0.91	0.56	0.10	0.10	0.97	0.35		0.95	0.91	0.01	0.44
Control Delay	92.4	5.1	0.3	20.8	48.3	7.9		92.1	74.1	24.9	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	92.4	5.1	0.3	20.8	48.3	7.9		92.1	74.1	24.9	17.0
LOS	F	A	A	C	D	A		F	E	C	B
Approach Delay		24.4			42.7			92.1		46.6	
Approach LOS		C			D			F		D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 39.6	Intersection LOS: D
Intersection Capacity Utilization 74.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd



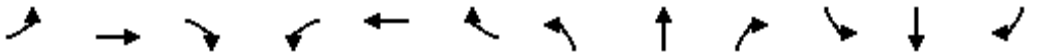


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	300	936	92	22	1606	243	190	327	7	300
v/c Ratio	0.91	0.56	0.10	0.10	0.97	0.35	0.95	0.91	0.01	0.44
Control Delay	92.4	5.1	0.3	20.8	48.3	7.9	92.1	74.1	24.9	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.4	5.1	0.3	20.8	48.3	7.9	92.1	74.1	24.9	17.0
Queue Length 50th (ft)	100	38	0	12	387	35	108	107	3	103
Queue Length 95th (ft)	#179	64	m0	m12	#476	72	#245	#189	14	174
Internal Link Dist (ft)		3939			643		194		367	
Turn Bay Length (ft)	150			100						
Base Capacity (vph)	329	1665	937	223	1657	689	200	359	557	680
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.56	0.10	0.10	0.97	0.35	0.95	0.91	0.01	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	899	88	21	1542	233	80	37	65	314	7	288
Future Volume (veh/h)	288	899	88	21	1542	233	80	37	65	314	7	288
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1870	1870	1559	1648	1870	1870	1870	1648	1870	1648
Adj Flow Rate, veh/h	300	936	92	22	1606	243	83	39	68	327	7	300
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	2	2	23	17	2	2	2	17	2	17
Cap, veh/h	335	1684	892	272	1673	549	117	40	58	365	559	571
Arrive On Green	0.11	0.56	0.56	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.30	0.30
Sat Flow, veh/h	3045	2991	1585	549	4256	1397	550	332	491	3045	1870	1397
Grp Volume(v), veh/h	300	936	92	22	1606	243	190	0	0	327	7	300
Grp Sat Flow(s),veh/h/ln	1522	1495	1585	549	1419	1397	1373	0	0	1522	1870	1397
Q Serve(g_s), s	9.7	19.9	2.7	3.6	37.5	16.1	11.1	0.0	0.0	10.6	0.3	16.2
Cycle Q Clear(g_c), s	9.7	19.9	2.7	6.5	37.5	16.1	11.9	0.0	0.0	10.6	0.3	16.2
Prop In Lane	1.00		1.00	1.00		1.00	0.44		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	335	1684	892	272	1673	549	215	0	0	365	559	571
V/C Ratio(X)	0.90	0.56	0.10	0.08	0.96	0.44	0.88	0.00	0.00	0.89	0.01	0.53
Avail Cap(c_a), veh/h	335	1684	892	272	1673	549	215	0	0	365	559	571
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.70	0.70	0.70	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	13.9	10.1	30.5	42.7	33.4	44.8	0.0	0.0	43.4	24.7	22.2
Incr Delay (d2), s/veh	21.5	1.1	0.2	0.4	11.2	1.8	32.1	0.0	0.0	23.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	6.4	0.9	0.5	15.9	6.3	6.7	0.0	0.0	5.1	0.1	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	15.0	10.3	30.9	53.9	35.2	76.9	0.0	0.0	66.8	24.7	23.1
LnGrp LOS	E	B	B	C	D	D	E	A	A	E	C	C
Approach Vol, veh/h		1328			1871			190			634	
Approach Delay, s/veh		26.0			51.2			76.9			45.7	
Approach LOS		C			D			E			D	

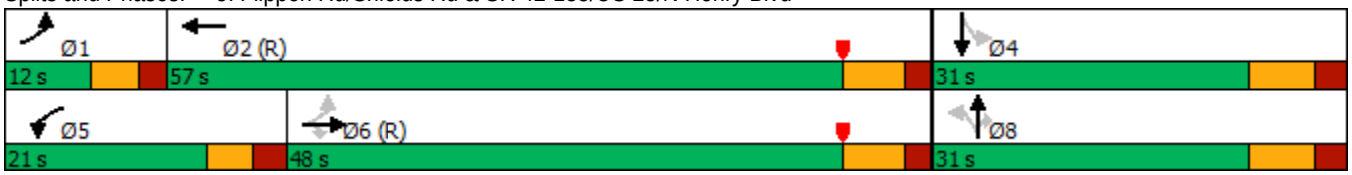
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	17.0	46.4		36.6		63.4	18.0	18.6				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1	6.0	6.7				
Max Green Setting (Gmax), s	11.0	39.3		29.9		56.3	12.0	11.9				
Max Q Clear Time (g_c+I1), s	11.7	39.5		18.2		21.9	12.6	13.9				
Green Ext Time (p_c), s	0.0	0.0		0.8		15.7	0.0	0.0				

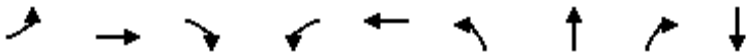
Intersection Summary			
HCM 6th Ctrl Delay		43.2	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	1008	172	314	1807	376	18	300	30	52
Future Volume (vph)	5	1008	172	314	1807	376	18	300	30	52
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6			8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	48.0	48.0	21.0	57.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	12.0%	48.0%	48.0%	21.0%	57.0%	31.0%	31.0%	31.0%	31.0%	31.0%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	48.1	41.0	41.0	13.9	58.6	25.0	25.0	25.0		25.0
Actuated g/C Ratio	0.48	0.41	0.41	0.14	0.59	0.25	0.25	0.25		0.25
v/c Ratio	0.03	0.62	0.28	0.71	0.77	1.17	0.04	0.34		0.26
Control Delay	8.2	25.3	4.1	37.0	18.3	138.4	29.9	4.7		29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	8.2	25.3	4.1	37.0	18.3	138.4	29.9	4.7		29.6
LOS	A	C	A	D	B	F	C	A		C
Approach Delay		22.1			21.1		77.8			29.6
Approach LOS		C			C		E			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 16 (16%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





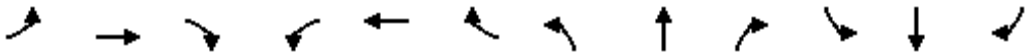
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	5	1061	181	331	1910	396	19	316	110
v/c Ratio	0.03	0.62	0.28	0.71	0.77	1.17	0.04	0.34	0.26
Control Delay	8.2	25.3	4.1	37.0	18.3	138.4	29.9	4.7	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	25.3	4.1	37.0	18.3	138.4	29.9	4.7	29.6
Queue Length 50th (ft)	1	191	0	85	404	~314	9	0	51
Queue Length 95th (ft)	5	238	41	m100	m471	#497	28	36	100
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	190	1726	643	505	2487	339	465	934	421
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.61	0.28	0.66	0.77	1.17	0.04	0.34	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1008	172	314	1807	8	376	18	300	30	52	22
Future Volume (veh/h)	5	1008	172	314	1807	8	376	18	300	30	52	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1841	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1061	181	331	1902	8	396	19	316	32	55	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	25	25	4	22	22	2	2	2	2	2	2
Cap, veh/h	139	1854	575	405	2470	10	389	441	658	127	207	76
Arrive On Green	0.01	0.44	0.44	0.12	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	4176	1296	3401	4417	19	1321	1870	2790	342	878	322
Grp Volume(v), veh/h	5	1061	181	331	1234	676	396	19	316	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1392	1296	1700	1432	1571	1321	1870	1395	1542	0	0
Q Serve(g_s), s	0.2	18.9	9.0	9.5	33.3	33.3	18.6	0.8	9.8	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.9	9.0	9.5	33.3	33.3	23.6	0.8	9.8	5.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.29		0.21
Lane Grp Cap(c), veh/h	139	1854	575	405	1602	878	389	441	658	410	0	0
V/C Ratio(X)	0.04	0.57	0.31	0.82	0.77	0.77	1.02	0.04	0.48	0.27	0.00	0.00
Avail Cap(c_a), veh/h	239	1854	575	510	1602	878	389	441	658	410	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.34	0.34	0.34	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.5	20.7	18.0	43.0	17.1	17.1	40.3	29.5	32.9	31.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.3	1.4	2.9	1.3	2.3	50.0	0.1	1.2	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.9	2.7	4.1	10.2	11.4	15.0	0.4	3.3	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	22.0	19.4	45.9	18.3	19.3	90.3	29.6	34.1	31.8	0.0	0.0
LnGrp LOS	B	C	B	D	B	B	F	C	C	C	A	A
Approach Vol, veh/h		1247			2241			731			110	
Approach Delay, s/veh		21.6			22.7			64.4			31.8	
Approach LOS		C			C			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	62.6		31.0	17.9	51.1		31.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	50.3		23.6	15.0	41.3		23.6				
Max Q Clear Time (g_c+I1), s	2.2	35.3		7.0	11.5	20.9		25.6				
Green Ext Time (p_c), s	0.0	13.6		0.8	0.4	12.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		29.7	
HCM 6th LOS		C	

Intersection	
Int Delay, s/veh	60.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	3	157	12	3	16	277	1816	25	9	872	72
Future Vol, veh/h	34	3	157	12	3	16	277	1816	25	9	872	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	36	3	165	13	3	17	292	1912	26	9	918	76

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2478	3458	459	2975	3508	956	994	0	0	1938	0	0
Stage 1	936	936	-	2496	2496	-	-	-	-	-	-	-
Stage 2	1542	2522	-	479	1012	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 15	7	549	~ 6	6	258	692	-	-	299	-	-
Stage 1	285	342	-	29	57	-	-	-	-	-	-	-
Stage 2	120	55	-	537	315	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	4	549	~ 1	~ 3	258	692	-	-	299	-	-
Mov Cap-2 Maneuver	-	4	-	~ 1	~ 3	-	-	-	-	-	-	-
Stage 1	165	332	-	17	33	-	-	-	-	-	-	-
Stage 2	59	32	-	361	306	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		$ 6294.2	1.8	0.2
HCM LOS	-	F		

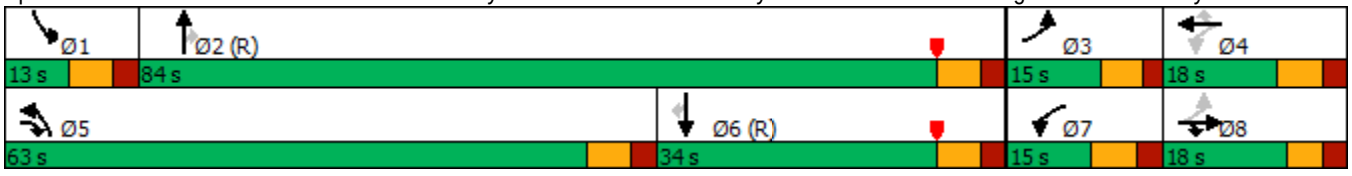
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	692	-	-	-	549	1	258	299	-	-
HCM Lane V/C Ratio	0.421	-	-	-	0.301	15.789	0.065	0.032	-	-
HCM Control Delay (s)	13.9	-	-	-	14.1	$ 42986.7	19.9	17.4	-	-
HCM Lane LOS	B	-	-	-	B	F	C	C	-	-
HCM 95th %tile Q(veh)	2.1	-	-	-	1.3	3.5	0.2	0.1	-	-

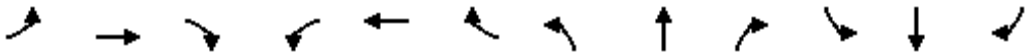
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	78	548	41	62	51	1048	721	45	25	370	268
Future Volume (vph)	156	78	548	41	62	51	1048	721	45	25	370	268
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	15.0	18.0		15.0	18.0	18.0	63.0	84.0	84.0	13.0	34.0	34.0
Total Split (%)	11.5%	13.8%		11.5%	13.8%	13.8%	48.5%	64.6%	64.6%	10.0%	26.2%	26.2%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	26.7	16.6	77.1	17.7	10.9	10.9	53.7	80.3	80.3	6.5	27.6	27.6
Actuated g/C Ratio	0.21	0.13	0.59	0.14	0.08	0.08	0.41	0.62	0.62	0.05	0.21	0.21
v/c Ratio	0.68	0.18	0.40	0.21	0.42	0.17	0.88	0.42	0.05	0.30	0.43	0.60
Control Delay	44.6	36.0	23.0	43.4	64.9	1.1	44.7	14.8	0.1	68.9	47.3	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	36.0	23.0	43.4	64.9	1.1	44.7	14.8	0.1	68.9	47.3	17.7
LOS	D	D	C	D	E	A	D	B	A	E	D	B
Approach Delay		28.6			38.2			31.7			36.1	
Approach LOS		C			D			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 32.2	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy

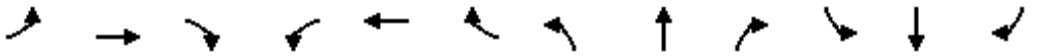




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	163	81	571	43	65	53	1092	751	47	26	385	279
v/c Ratio	0.68	0.18	0.40	0.21	0.42	0.17	0.88	0.42	0.05	0.30	0.43	0.60
Control Delay	44.6	36.0	23.0	43.4	64.9	1.1	44.7	14.8	0.1	68.9	47.3	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	36.0	23.0	43.4	64.9	1.1	44.7	14.8	0.1	68.9	47.3	17.7
Queue Length 50th (ft)	99	33	200	28	53	0	417	193	0	22	110	45
Queue Length 95th (ft)	#208	61	304	65	102	0	514	220	0	54	139	139
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	238	451	1487	208	164	328	1293	1821	1053	88	985	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.18	0.38	0.21	0.40	0.16	0.84	0.41	0.04	0.30	0.39	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	78	548	41	62	51	1048	721	45	25	370	268
Future Volume (veh/h)	156	78	548	41	62	51	1048	721	45	25	370	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1648
Adj Flow Rate, veh/h	162	81	571	43	65	53	1092	751	47	26	385	279
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	2	17	2	2	2	17	25	2	2	23	17
Cap, veh/h	216	328	1181	197	148	126	1182	1794	978	50	1098	360
Arrive On Green	0.07	0.09	0.09	0.05	0.08	0.08	0.39	0.62	0.62	0.03	0.26	0.26
Sat Flow, veh/h	1570	3554	2458	1781	1870	1585	3045	2906	1585	1781	4256	1397
Grp Volume(v), veh/h	162	81	571	43	65	53	1092	751	47	26	385	279
Grp Sat Flow(s),veh/h/ln	1570	1777	1229	1781	1870	1585	1522	1453	1585	1781	1419	1397
Q Serve(g_s), s	9.0	2.8	12.0	2.8	4.3	4.1	44.5	17.3	1.5	1.9	9.6	24.1
Cycle Q Clear(g_c), s	9.0	2.8	12.0	2.8	4.3	4.1	44.5	17.3	1.5	1.9	9.6	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	328	1181	197	148	126	1182	1794	978	50	1098	360
V/C Ratio(X)	0.75	0.25	0.48	0.22	0.44	0.42	0.92	0.42	0.05	0.52	0.35	0.77
Avail Cap(c_a), veh/h	216	328	1181	221	158	134	1316	1794	978	84	1098	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	54.8	22.9	50.7	57.1	57.0	37.9	12.8	9.8	62.3	39.4	44.7
Incr Delay (d2), s/veh	12.9	0.4	0.3	0.7	2.4	2.7	10.6	0.7	0.1	21.1	0.9	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.2	5.7	1.3	2.2	1.7	17.5	5.4	0.5	1.1	3.4	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.0	55.2	23.2	51.3	59.5	59.7	48.5	13.6	9.9	83.4	40.2	59.7
LnGrp LOS	E	E	C	D	E	E	D	B	A	F	D	E
Approach Vol, veh/h		814			161			1890			690	
Approach Delay, s/veh		35.1			57.4			33.7			49.7	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	87.1	15.0	17.3	57.3	40.4	13.3	19.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	6.1	77.1	9.0	11.0	56.2	27.1	8.0	* 12
Max Q Clear Time (g_c+I1), s	3.9	19.3	11.0	6.3	46.5	26.1	4.8	14.0
Green Ext Time (p_c), s	0.0	12.7	0.0	0.2	4.0	0.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

Notes

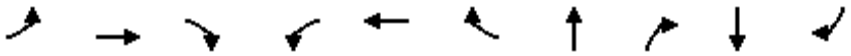
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	832	58	66	1386	4	60	1	51	1	1	5
Future Volume (vph)	2	832	58	66	1386	4	60	1	51	1	1	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	14.0	92.0	92.0	14.0	92.0	92.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	70.8%	70.8%	10.8%	70.8%	70.8%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Yellow Time (s)	3.3	4.9	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	103.2	98.8	98.8	107.6	106.4	106.4		11.8	11.8		11.8	11.8
Actuated g/C Ratio	0.79	0.76	0.76	0.83	0.82	0.82		0.09	0.09		0.09	0.09
v/c Ratio	0.01	0.37	0.05	0.13	0.58	0.00		0.52	0.25		0.01	0.02
Control Delay	0.5	2.1	0.2	3.7	11.6	0.0		70.7	7.0		51.0	0.2
Queue Delay	0.0	0.1	0.0	0.0	0.1	0.0		0.0	0.0		0.0	0.0
Total Delay	0.5	2.2	0.2	3.7	11.8	0.0		70.7	7.0		51.0	0.2
LOS	A	A	A	A	B	A		E	A		D	A
Approach Delay		2.1			11.4			41.6			14.7	
Approach LOS		A			B			D			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 36 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd

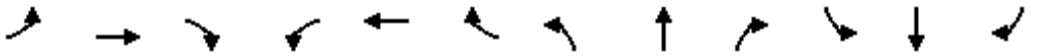




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2	876	61	69	1459	4	64	54	2	5
v/c Ratio	0.01	0.37	0.05	0.13	0.58	0.00	0.52	0.25	0.01	0.02
Control Delay	0.5	2.1	0.2	3.7	11.6	0.0	70.7	7.0	51.0	0.2
Queue Delay	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	2.2	0.2	3.7	11.8	0.0	70.7	7.0	51.0	0.2
Queue Length 50th (ft)	0	27	1	4	56	0	53	0	2	0
Queue Length 95th (ft)	m0	2	0	m30	642	m0	98	19	10	0
Internal Link Dist (ft)		492			895		2216		57	
Turn Bay Length (ft)	85			95		170		200		
Base Capacity (vph)	329	2343	1222	530	2524	1310	176	276	205	276
Starvation Cap Reductn	0	342	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	224	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.44	0.05	0.13	0.63	0.00	0.36	0.20	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	832	58	66	1386	4	60	1	51	1	1	5
Future Volume (veh/h)	2	832	58	66	1386	4	60	1	51	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1870	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	876	61	69	1459	4	63	1	54	1	1	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	2	2	17	2	2	2	2	2	2	2
Cap, veh/h	307	2120	1073	535	2240	1134	55	0	206	42	29	206
Arrive On Green	0.01	1.00	1.00	0.08	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3131	1585	1781	3131	1585	0	4	1585	0	221	1585
Grp Volume(v), veh/h	2	876	61	69	1459	4	64	0	54	2	0	5
Grp Sat Flow(s),veh/h/ln	1781	1566	1585	1781	1566	1585	4	0	1585	221	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.4	0.0	0.0	16.9	0.0	4.0	16.9	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	0.98		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	307	2120	1073	535	2240	1134	55	0	206	70	0	206
V/C Ratio(X)	0.01	0.41	0.06	0.13	0.65	0.00	1.16	0.00	0.26	0.03	0.00	0.02
Avail Cap(c_a), veh/h	413	2120	1073	574	2240	1134	55	0	206	70	0	206
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.49	0.49	0.49	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.6	0.0	0.0	4.7	0.0	0.0	64.9	0.0	50.9	50.1	0.0	49.4
Incr Delay (d2), s/veh	0.0	0.5	0.1	0.1	0.7	0.0	169.4	0.0	0.7	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	0.4	0.2	0.0	4.4	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.6	0.5	0.1	4.8	0.7	0.0	234.3	0.0	51.6	50.3	0.0	49.4
LnGrp LOS	A	A	A	A	A	A	F	A	D	D	A	D
Approach Vol, veh/h		939			1532			118			7	
Approach Delay, s/veh		0.5			0.9			150.7			49.6	
Approach LOS		A			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	94.8		24.0	6.2	99.8		24.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 8.3	* 85		16.9	* 8.2	* 85		16.9				
Max Q Clear Time (g_c+I1), s	3.4	2.0		18.9	2.0	2.0		18.9				
Green Ext Time (p_c), s	0.0	16.7		0.0	0.0	38.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		7.7	
HCM 6th LOS		A	

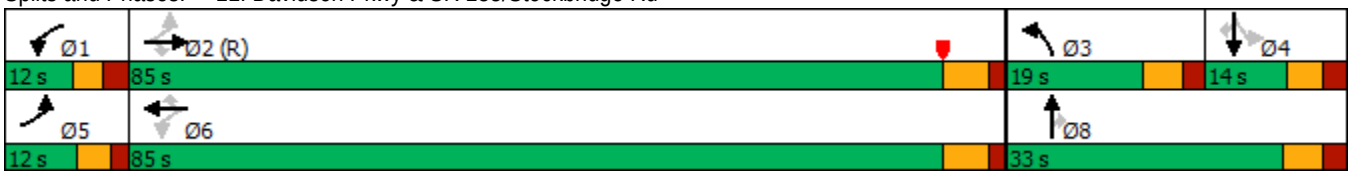
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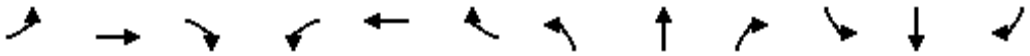
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	949	1156	40	1488	53	813	11	32	20	12	95
Future Volume (vph)	76	949	1156	40	1488	53	813	11	32	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.3	14.0	14.0	14.0
Total Split (s)	12.0	85.0	85.0	12.0	85.0	85.0	19.0	33.0	33.0	14.0	14.0	14.0
Total Split (%)	9.2%	65.4%	65.4%	9.2%	65.4%	65.4%	14.6%	25.4%	25.4%	10.8%	10.8%	10.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	86.5	79.6	79.6	84.5	77.4	77.4	14.6	19.2	19.2	8.0	8.0	8.0
Actuated g/C Ratio	0.67	0.61	0.61	0.65	0.60	0.60	0.11	0.15	0.15	0.06	0.06	0.06
v/c Ratio	0.37	0.27	0.91	0.12	0.43	0.06	0.85	0.04	0.11	0.25	0.11	0.47
Control Delay	11.4	13.8	24.4	3.3	5.3	0.2	65.4	42.4	0.8	65.7	60.1	12.8
Queue Delay	0.0	0.0	4.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	11.4	13.8	28.8	3.3	5.4	0.2	65.4	42.4	0.8	65.7	60.1	13.3
LOS	B	B	C	A	A	A	E	D	A	E	E	B
Approach Delay		21.7			5.2			62.7			26.1	
Approach LOS		C			A			E			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 98.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd



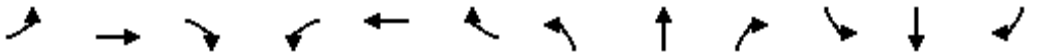


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	80	999	1217	42	1566	56	856	12	34	21	13	100
v/c Ratio	0.37	0.27	0.91	0.12	0.43	0.06	0.85	0.04	0.11	0.25	0.11	0.47
Control Delay	11.4	13.8	24.4	3.3	5.3	0.2	65.4	42.4	0.8	65.7	60.1	12.8
Queue Delay	0.0	0.0	4.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	11.4	13.8	28.8	3.3	5.4	0.2	65.4	42.4	0.8	65.7	60.1	13.3
Queue Length 50th (ft)	17	123	761	1	16	0	142	8	0	17	11	0
Queue Length 95th (ft)	m30	m129	m838	m10	74	m1	#187	26	1	46	33	36
Internal Link Dist (ft)		432			495			439			264	
Turn Bay Length (ft)	75		165	125								
Base Capacity (vph)	218	3785	1345	355	3697	1007	1012	382	383	85	114	213
Starvation Cap Reductn	0	0	85	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	39	0	0	804	0	0	0	0	0	0	15
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.27	0.97	0.12	0.54	0.06	0.85	0.03	0.09	0.25	0.11	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	949	1156	40	1488	53	813	11	32	20	12	95
Future Volume (veh/h)	76	949	1156	40	1488	53	813	11	32	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	999	0	42	1566	56	856	12	34	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	324	3785		465	3762	972	908	388	329	139	115	98
Arrive On Green	0.07	1.00	0.00	0.07	1.00	1.00	0.10	0.21	0.21	0.06	0.06	0.06
Sat Flow, veh/h	1781	6134	1585	1781	6134	1585	9085	1870	1585	1360	1870	1585
Grp Volume(v), veh/h	80	999	0	42	1566	56	856	12	34	21	13	100
Grp Sat Flow(s),veh/h/ln	1781	1227	1585	1781	1227	1585	1514	1870	1585	1360	1870	1585
Q Serve(g_s), s	2.1	0.0	0.0	1.1	0.0	0.0	12.2	0.7	2.3	1.9	0.9	8.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	1.1	0.0	0.0	12.2	0.7	2.3	1.9	0.9	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	3785		465	3762	972	908	388	329	139	115	98
V/C Ratio(X)	0.25	0.26		0.09	0.42	0.06	0.94	0.03	0.10	0.15	0.11	1.03
Avail Cap(c_a), veh/h	342	3785		490	3762	972	908	388	329	139	115	98
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.00	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	0.0	7.9	0.0	0.0	58.1	41.1	41.7	58.1	57.6	61.0
Incr Delay (d2), s/veh	0.3	0.1	0.0	0.1	0.1	0.0	17.6	0.0	0.1	0.5	0.4	98.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.4	0.0	0.0	5.4	0.3	0.9	0.7	0.4	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	0.1	0.0	7.9	0.1	0.0	75.7	41.1	41.8	58.6	58.1	159.1
LnGrp LOS	A	A		A	A	A	E	D	D	E	E	F
Approach Vol, veh/h		1079	A		1664			902			134	
Approach Delay, s/veh		0.7			0.3			73.9			133.6	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	86.5	19.0	14.3	10.7	86.0		33.3				
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 79	13.0	* 8	7.0	* 79		* 27				
Max Q Clear Time (g_c+I1), s	3.1	2.0	14.2	10.0	4.1	2.0		4.3				
Green Ext Time (p_c), s	0.0	18.7	0.0	0.0	0.0	40.5		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

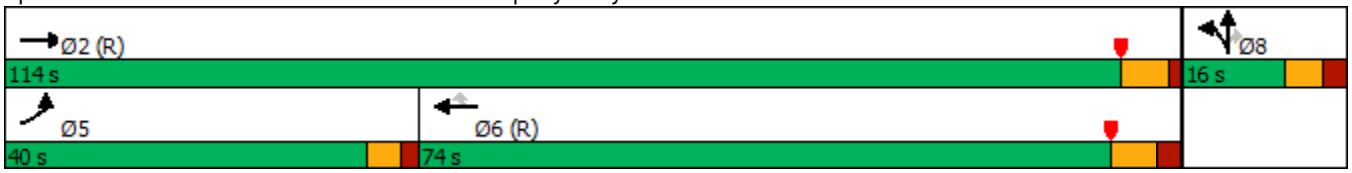
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	622	1844	1919	530	0	351
Future Volume (vph)	622	1844	1919	530	0	351
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	30.3	108.0	71.7	71.7	9.9	9.9
Actuated g/C Ratio	0.23	0.83	0.55	0.55	0.08	0.08
v/c Ratio	0.85	0.59	0.92	0.58	0.39	1.35
Control Delay	48.0	7.7	35.5	14.0	66.1	216.5
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.1
Total Delay	48.0	7.7	35.5	14.6	66.1	216.6
LOS	D	A	D	B	E	F
Approach Delay		17.9	31.0		198.6	
Approach LOS		B	C		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 37.5	Intersection LOS: D
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





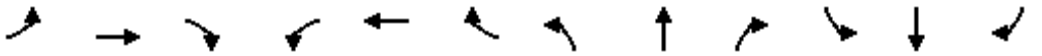
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	676	2004	2086	576	52	382
v/c Ratio	0.85	0.59	0.92	0.58	0.39	1.35
Control Delay	48.0	7.7	35.5	14.0	66.1	216.5
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.1
Total Delay	48.0	7.7	35.5	14.6	66.1	216.6
Queue Length 50th (ft)	285	335	670	177	43	~205
Queue Length 95th (ft)	350	358	#751	m250	87	#320
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	924	3420	2271	993	134	282
Starvation Cap Reductn	0	0	0	139	0	0
Spillback Cap Reductn	0	127	0	0	0	2
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.61	0.92	0.67	0.39	1.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	622	1844	0	0	1919	530	48	0	351	0	0	0
Future Volume (veh/h)	622	1844	0	0	1919	530	48	0	351	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	676	2004	0	0	2086	576	52	0	382			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	737	3403	0	0	2362	905	136	0	212			
Arrive On Green	0.43	1.00	0.00	0.00	0.57	0.57	0.08	0.00	0.08			
Sat Flow, veh/h	3456	4271	0	0	4271	1585	1781	0	2790			
Grp Volume(v), veh/h	676	2004	0	0	2086	576	52	0	382			
Grp Sat Flow(s),veh/h/ln	1728	1378	0	0	1378	1585	1781	0	1395			
Q Serve(g_s), s	23.9	0.0	0.0	0.0	56.7	31.8	3.6	0.0	9.9			
Cycle Q Clear(g_c), s	23.9	0.0	0.0	0.0	56.7	31.8	3.6	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	737	3403	0	0	2362	905	136	0	212			
V/C Ratio(X)	0.92	0.59	0.00	0.00	0.88	0.64	0.38	0.00	1.80			
Avail Cap(c_a), veh/h	930	3435	0	0	2362	905	136	0	212			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.62	0.62	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.2	0.0	0.0	0.0	24.1	18.8	57.1	0.0	60.0			
Incr Delay (d2), s/veh	7.9	0.5	0.0	0.0	4.3	2.7	1.8	0.0	377.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.3	0.1	0.0	0.0	17.7	11.5	1.6	0.0	14.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	0.5	0.0	0.0	28.4	21.5	58.9	0.0	437.4			
LnGrp LOS	D	A	A	A	C	C	E	A	F			
Approach Vol, veh/h		2680			2662			434				
Approach Delay, s/veh		11.5			26.9			392.0				
Approach LOS		B			C			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			32.7	81.3		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			25.9	58.7		11.9				
Green Ext Time (p_c), s		69.6			1.8	8.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	47.2
HCM 6th LOS	D

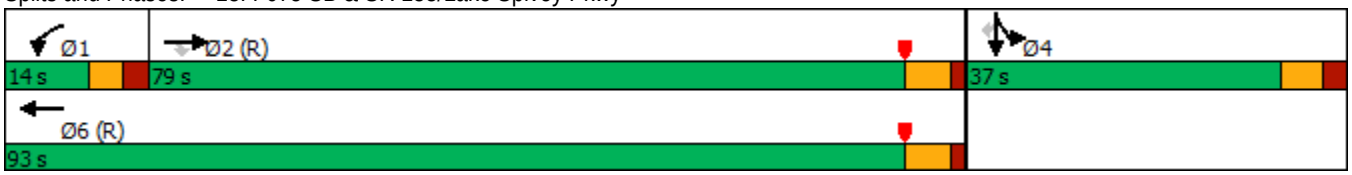
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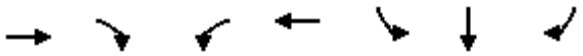
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2034	84	281	1694	449	0	604
Future Volume (vph)	2034	84	281	1694	449	0	604
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	71.5	71.5	8.1	85.5	32.1	32.1	32.1
Actuated g/C Ratio	0.55	0.55	0.06	0.66	0.25	0.25	0.25
v/c Ratio	0.78	0.10	1.45	0.69	0.33	0.33	0.97
Control Delay	14.8	1.1	261.4	5.6	41.6	43.9	75.9
Queue Delay	0.0	0.0	0.0	11.8	0.0	0.0	0.0
Total Delay	14.9	1.1	261.4	17.4	41.6	43.9	75.9
LOS	B	A	F	B	D	D	E
Approach Delay	14.3			52.1		61.5	
Approach LOS	B			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay: 38.5	Intersection LOS: D
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





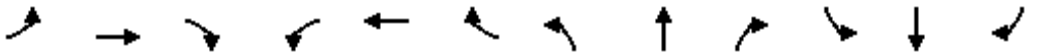
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2235	92	309	1862	370	123	664
v/c Ratio	0.78	0.10	1.45	0.69	0.33	0.33	0.97
Control Delay	14.8	1.1	261.4	5.6	41.6	43.9	75.9
Queue Delay	0.0	0.0	0.0	11.8	0.0	0.0	0.0
Total Delay	14.9	1.1	261.4	17.4	41.6	43.9	75.9
Queue Length 50th (ft)	239	2	~180	208	101	101	~327
Queue Length 95th (ft)	149	m5	m#207	2	136	170	#468
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2916	930	213	2758	1126	375	687
Starvation Cap Reductn	34	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	902	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.10	1.45	1.00	0.33	0.33	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2034	84	281	1694	0	0	0	0	449	0	604
Future Volume (veh/h)	0	2034	84	281	1694	0	0	0	0	449	0	604
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1870	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2235	92	309	1862	0				493	0	664
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	2	2	26	0				2	2	2
Cap, veh/h	0	2961	901	215	2796	0				1628	0	725
Arrive On Green	0.00	1.00	1.00	0.02	0.22	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	5423	1585	3456	4271	0				7125	0	3170
Grp Volume(v), veh/h	0	2235	92	309	1862	0				493	0	664
Grp Sat Flow(s),veh/h/ln	0	1303	1585	1728	1378	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	8.1	53.4	0.0				7.5	0.0	26.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.1	53.4	0.0				7.5	0.0	26.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2961	901	215	2796	0				1628	0	725
V/C Ratio(X)	0.00	0.75	0.10	1.44	0.67	0.00				0.30	0.00	0.92
Avail Cap(c_a), veh/h	0	2961	901	215	2796	0				1672	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.71	0.28	0.28	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	63.7	37.1	0.0				41.6	0.0	48.9
Incr Delay (d2), s/veh	0.0	1.3	0.2	203.2	0.4	0.0				0.1	0.0	16.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	9.7	19.7	0.0				3.2	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.3	0.2	266.9	37.5	0.0				41.7	0.0	65.0
LnGrp LOS	A	A	A	F	D	A				D	A	E
Approach Vol, veh/h		2327			2171						1157	
Approach Delay, s/veh		1.3			70.1						55.1	
Approach LOS		A			E						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.0	79.8		36.2		93.8
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	10.1	2.0		28.6		55.4
Green Ext Time (p_c), s	0.0	60.0		1.1		26.1

Intersection Summary			
HCM 6th Ctrl Delay		38.7	
HCM 6th LOS		D	

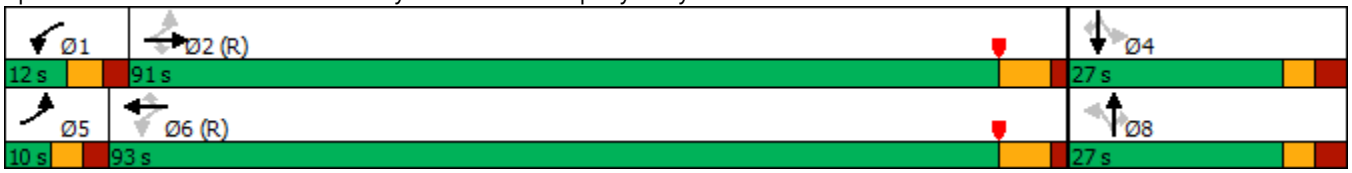
Notes

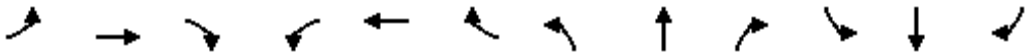
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1907	27	92	2092	47	22	3	79	91	9	63
Future Volume (vph)	32	1907	27	92	2092	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	95.0	88.9	88.9	100.4	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.73	0.68	0.68	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.28	0.67	0.03	0.59	0.98	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	15.3	6.5	0.0	30.6	34.1	0.9	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	6.5	0.0	30.6	35.3	0.9	51.4	47.7	15.9	69.3	48.6	10.5
LOS	B	A	A	C	D	A	D	D	B	E	D	B
Approach Delay		6.6			34.4			24.2			45.5	
Approach LOS		A			C			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 88.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





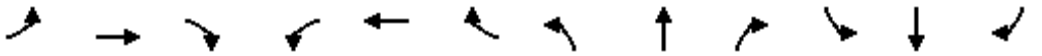
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	2096	30	101	2299	52	24	3	87	100	10	69
v/c Ratio	0.28	0.67	0.03	0.59	0.98	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	15.3	6.5	0.0	30.6	34.1	0.9	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	6.5	0.0	30.6	35.3	0.9	51.4	47.7	15.9	69.3	48.6	10.5
Queue Length 50th (ft)	3	117	0	19	~1126	0	18	2	5	81	8	0
Queue Length 95th (ft)	m9	168	m0	m49	m#1300	m1	44	12	53	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	123	3138	1106	172	2339	1179	221	295	318	223	295	318
Starvation Cap Reductn	0	0	0	0	17	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.67	0.03	0.59	0.99	0.04	0.11	0.01	0.27	0.45	0.03	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1907	27	92	2092	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1907	27	92	2092	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	2096	30	101	2299	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	205	3383	1150	247	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	4661	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	2096	30	101	2299	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1554	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	3383	1150	247	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.17	0.62	0.03	0.41	0.96	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	226	3383	1150	276	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.1	0.6	0.0	0.2	7.4	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.6	2.5	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	0.6	0.0	4.2	7.4	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		2161			2452			114			179	
Approach Delay, s/veh		0.7			7.2			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	6.0	* 84		* 21	4.4	* 86		* 21				
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8				
Green Ext Time (p_c), s	0.0	61.9		0.5	0.0	73.9		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		7.4
HCM 6th LOS		A

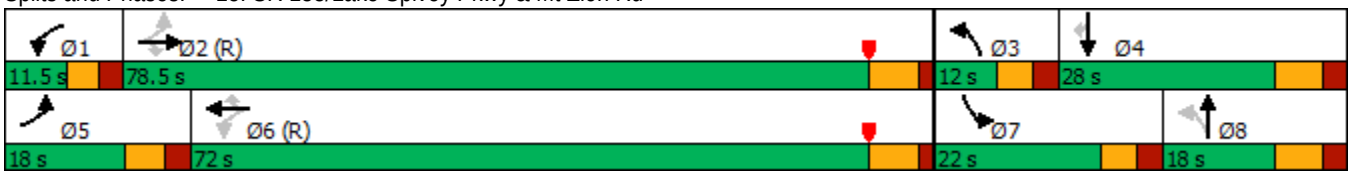
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	1671	84	31	1845	281	76	28	286	27	316
Future Volume (vph)	188	1671	84	31	1845	281	76	28	286	27	316
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8				4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	85.7	78.7	78.7	74.1	67.2	67.2	15.4	10.2	17.8	18.9	18.9
Actuated g/C Ratio	0.66	0.61	0.61	0.57	0.52	0.52	0.12	0.08	0.14	0.15	0.15
v/c Ratio	0.91	0.65	0.09	0.20	0.85	0.32	0.46	0.38	0.66	0.11	0.90
Control Delay	69.0	9.2	0.1	11.5	21.9	5.1	49.8	37.9	61.5	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	9.2	0.1	11.5	21.9	5.1	49.8	37.9	61.5	47.9	52.2
LOS	E	A	A	B	C	A	D	D	E	D	D
Approach Delay		14.6			19.5			44.7		56.3	
Approach LOS		B			B			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 77.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd



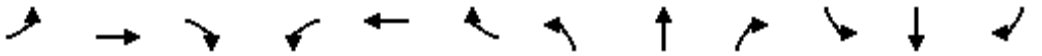


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	1816	91	34	2005	305	83	63	311	29	343
v/c Ratio	0.91	0.65	0.09	0.20	0.85	0.32	0.46	0.38	0.66	0.11	0.90
Control Delay	69.0	9.2	0.1	11.5	21.9	5.1	49.8	37.9	61.5	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	9.2	0.1	11.5	21.9	5.1	49.8	37.9	61.5	47.9	52.2
Queue Length 50th (ft)	115	299	0	11	382	37	54	24	132	21	142
Queue Length 95th (ft)	m#189	338	m0	m12	m366	m44	100	71	184	51	#306
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	223	2777	1029	166	2372	941	181	174	474	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.65	0.09	0.20	0.85	0.32	0.46	0.36	0.66	0.10	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1671	84	31	1845	281	76	28	30	286	27	316
Future Volume (veh/h)	188	1671	84	31	1845	281	76	28	30	286	27	316
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1816	91	34	2005	305	83	30	33	311	29	343
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	264	2648	901	237	2443	831	240	82	90	366	301	255
Arrive On Green	0.14	1.00	1.00	0.07	1.00	1.00	0.05	0.10	0.10	0.11	0.16	0.16
Sat Flow, veh/h	1781	4661	1585	1781	4661	1585	1781	814	895	3456	1870	1585
Grp Volume(v), veh/h	204	1816	91	34	2005	305	83	0	63	311	29	343
Grp Sat Flow(s),veh/h/ln	1781	1554	1585	1781	1554	1585	1781	0	1709	1728	1870	1585
Q Serve(g_s), s	7.0	0.0	0.0	1.1	0.0	0.0	5.4	0.0	4.5	11.5	1.7	20.9
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.1	0.0	0.0	5.4	0.0	4.5	11.5	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	264	2648	901	237	2443	831	240	0	173	366	301	255
V/C Ratio(X)	0.77	0.69	0.10	0.14	0.82	0.37	0.35	0.00	0.36	0.85	0.10	1.35
Avail Cap(c_a), veh/h	299	2648	901	261	2443	831	240	0	173	425	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.20	0.20	0.20	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	12.6	0.0	0.0	49.6	0.0	54.5	57.1	46.5	54.6
Incr Delay (d2), s/veh	4.7	0.6	0.1	0.1	0.7	0.3	0.9	0.0	2.7	13.4	0.3	179.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.2	0.0	0.4	0.2	0.1	2.5	0.0	2.1	5.6	0.8	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.6	0.1	12.6	0.7	0.3	50.4	0.0	57.3	70.5	46.8	234.1
LnGrp LOS	B	A	A	B	A	A	D	A	E	E	D	F
Approach Vol, veh/h		2111			2344			146			683	
Approach Delay, s/veh		2.3			0.8			53.4			151.7	
Approach LOS		A			A			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	15.5	74.5	19.8	20.2
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.0	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.4	22.9	9.0	2.0	13.5	6.5
Green Ext Time (p_c), s	0.0	47.5	0.0	0.0	0.1	52.2	0.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

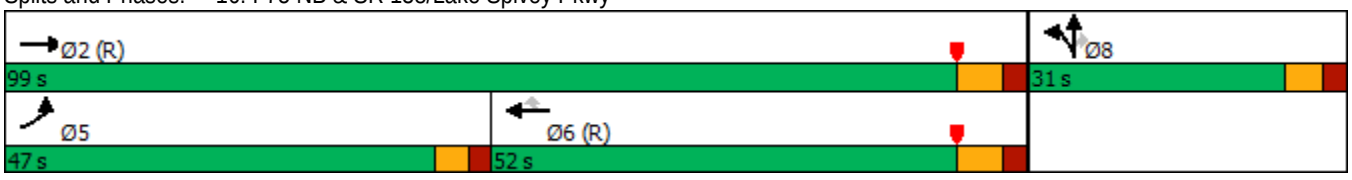
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	766	1835	1264	1051	342	0	243
Future Volume (vph)	766	1835	1264	1051	342	0	243
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	37.0	97.2	54.8	54.8	19.8	19.8	19.8
Actuated g/C Ratio	0.28	0.75	0.42	0.42	0.15	0.15	0.15
v/c Ratio	0.86	0.84	1.03	0.72	0.74	0.74	0.87
Control Delay	41.9	20.1	57.5	8.6	69.2	69.2	63.9
Queue Delay	0.0	20.7	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	40.8	57.5	8.6	69.2	69.2	63.9
LOS	D	D	E	A	E	E	E
Approach Delay		41.1	35.3			67.0	
Approach LOS		D	D			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	842	2016	1389	1155	188	188	267
v/c Ratio	0.86	0.84	1.03	0.72	0.74	0.74	0.87
Control Delay	41.9	20.1	57.5	8.6	69.2	69.2	63.9
Queue Delay	0.0	20.7	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	40.8	57.5	8.6	69.2	69.2	63.9
Queue Length 50th (ft)	332	955	~664	62	160	160	158
Queue Length 95th (ft)	m313	m931	#900	134	238	238	254
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	1095	2389	1346	1600	321	321	367
Starvation Cap Reductn	0	442	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.04	1.03	0.72	0.59	0.59	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	766	1835	0	0	1264	1051	342	0	243	0	0	0
Future Volume (veh/h)	766	1835	0	0	1264	1051	342	0	243	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	842	2016	0	0	1389	1155	376	0	267			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	928	2327	0	0	1318	1134	651	0	290			
Arrive On Green	0.27	0.72	0.00	0.00	0.81	0.81	0.18	0.00	0.18			
Sat Flow, veh/h	3456	3329	0	0	3329	2790	3563	0	1585			
Grp Volume(v), veh/h	842	2016	0	0	1389	1155	376	0	267			
Grp Sat Flow(s),veh/h/ln	1728	1622	0	0	1622	1395	1781	0	1585			
Q Serve(g_s), s	30.6	60.4	0.0	0.0	52.8	52.8	12.5	0.0	21.5			
Cycle Q Clear(g_c), s	30.6	60.4	0.0	0.0	52.8	52.8	12.5	0.0	21.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	928	2327	0	0	1318	1134	651	0	290			
V/C Ratio(X)	0.91	0.87	0.00	0.00	1.05	1.02	0.58	0.00	0.92			
Avail Cap(c_a), veh/h	1103	2327	0	0	1318	1134	682	0	304			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.43	0.43	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.0	13.7	0.0	0.0	12.2	12.2	48.5	0.0	52.2			
Incr Delay (d2), s/veh	1.0	0.4	0.0	0.0	32.7	22.5	0.7	0.0	30.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.9	17.9	0.0	0.0	10.2	7.2	5.4	0.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	14.2	0.0	0.0	44.9	34.6	49.2	0.0	82.7			
LnGrp LOS	D	B	A	A	F	F	D	A	F			
Approach Vol, veh/h		2858			2544			643				
Approach Delay, s/veh		23.9			40.2			63.1				
Approach LOS		C			D			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		100.1			40.4	59.7		29.9				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		62.4			32.6	54.8		23.5				
Green Ext Time (p_c), s		26.7			2.3	0.0		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C

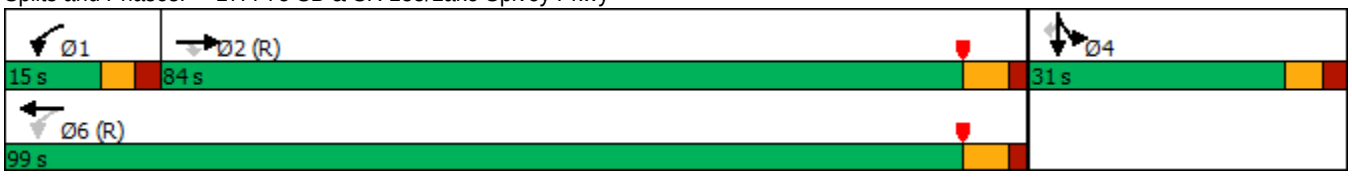
Notes

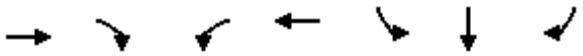
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1833	364	132	1419	787	0	299
Future Volume (vph)	1833	364	132	1419	787	0	299
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	84.0	84.0	15.0	99.0	31.0	31.0	31.0
Total Split (%)	64.6%	64.6%	11.5%	76.2%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	77.9	77.9	93.2	92.7	24.8	24.8	24.8
Actuated g/C Ratio	0.60	0.60	0.72	0.71	0.19	0.19	0.19
v/c Ratio	1.06	0.36	0.82	0.69	0.95	0.94	0.54
Control Delay	55.6	1.7	56.3	8.5	78.7	89.8	36.6
Queue Delay	0.0	0.0	0.0	0.9	45.5	49.4	0.0
Total Delay	55.6	1.7	56.3	9.5	124.2	139.2	36.6
LOS	E	A	E	A	F	F	D
Approach Delay	46.7			13.4		103.7	
Approach LOS	D			B		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 95 (73%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 48.8	Intersection LOS: D
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





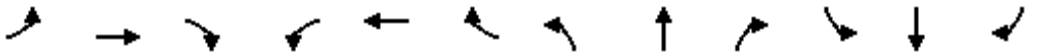
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2037	404	147	1577	586	288	332
v/c Ratio	1.06	0.36	0.82	0.69	0.95	0.94	0.54
Control Delay	55.6	1.7	56.3	8.5	78.7	89.8	36.6
Queue Delay	0.0	0.0	0.0	0.9	45.5	49.4	0.0
Total Delay	55.6	1.7	56.3	9.5	124.2	139.2	36.6
Queue Length 50th (ft)	~975	15	54	589	270	265	100
Queue Length 95th (ft)	m#1085	m17	m79	m587	#393	#458	156
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1915	1110	182	2278	614	307	611
Starvation Cap Reductn	0	0	0	395	0	0	0
Spillback Cap Reductn	0	0	0	0	231	115	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.36	0.81	0.84	1.53	1.50	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1833	364	132	1419	0	0	0	0	787	0	299
Future Volume (veh/h)	0	1833	364	132	1419	0	0	0	0	787	0	299
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2037	404	147	1577	0				874	0	332
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	2044	999	225	2337	0				980	0	581
Arrive On Green	0.00	1.00	1.00	0.05	0.72	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	3329	1585	1781	3329	0				5344	0	3170
Grp Volume(v), veh/h	0	2037	404	147	1577	0				874	0	332
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.6	34.4	0.0				20.8	0.0	12.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.6	34.4	0.0				20.8	0.0	12.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2044	999	225	2337	0				980	0	581
V/C Ratio(X)	0.00	1.00	0.40	0.65	0.67	0.00				0.89	0.00	0.57
Avail Cap(c_a), veh/h	0	2044	999	269	2337	0				1019	0	605
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.31	0.10	0.10	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	9.4	9.9	0.0				51.8	0.0	48.4
Incr Delay (d2), s/veh	0.0	10.4	0.4	0.4	0.2	0.0				9.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	0.1	1.2	10.1	0.0				9.8	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.4	0.4	9.8	10.0	0.0				61.6	0.0	49.6
LnGrp LOS	A	B	A	A	B	A				E	A	D
Approach Vol, veh/h		2441			1724						1206	
Approach Delay, s/veh		8.7			10.0						58.3	
Approach LOS		A			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.8	88.2		30.0		100.0
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 9.2	* 78		* 25		* 93
Max Q Clear Time (g_c+I1), s	5.6	2.0		22.8		36.4
Green Ext Time (p_c), s	0.1	65.4		1.1		35.5

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

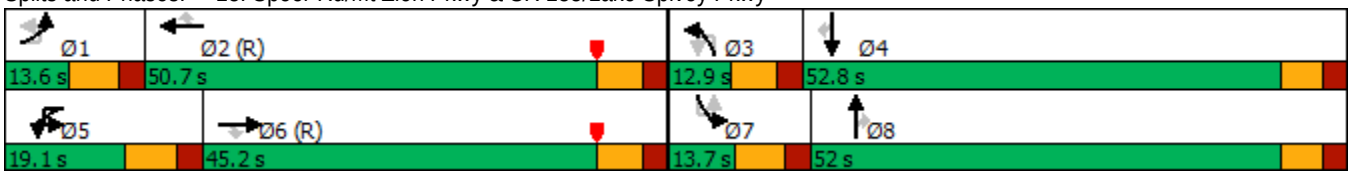
User approved volume balancing among the lanes for turning movement.

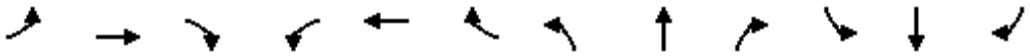
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	1104	82	285	1141	164	78	216	807	177	92	74
Future Volume (vph)	89	1104	82	285	1141	164	78	216	807	177	92	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	13.6	45.2	45.2	19.1	50.7	50.7	12.9	52.0	52.0	13.7	52.8	52.8
Total Split (%)	10.5%	34.8%	34.8%	14.7%	39.0%	39.0%	9.9%	40.0%	40.0%	10.5%	40.6%	40.6%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	7.2	39.9	39.9	15.2	47.9	47.9	6.1	39.8	39.8	6.5	40.7	40.7
Actuated g/C Ratio	0.06	0.31	0.31	0.12	0.37	0.37	0.05	0.31	0.31	0.05	0.31	0.31
v/c Ratio	0.52	0.88	0.15	0.78	0.74	0.26	0.54	0.22	0.87	1.14	0.09	0.13
Control Delay	63.6	44.2	3.7	82.7	31.5	5.2	73.4	33.0	40.5	164.8	30.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	44.2	3.7	82.7	31.5	5.2	73.4	33.0	40.5	164.8	30.2	0.5
LOS	E	D	A	F	C	A	E	C	D	F	C	A
Approach Delay		42.9			38.0			41.4			93.4	
Approach LOS		D			D			D			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 64 (49%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 44.7	Intersection LOS: D
Intersection Capacity Utilization 86.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy





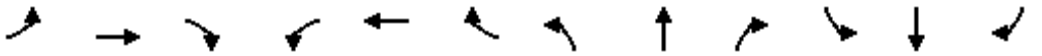
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	1213	90	313	1254	180	86	237	887	195	101	81
v/c Ratio	0.52	0.88	0.15	0.78	0.74	0.26	0.54	0.22	0.87	1.14	0.09	0.13
Control Delay	63.6	44.2	3.7	82.7	31.5	5.2	73.4	33.0	40.5	164.8	30.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	44.2	3.7	82.7	31.5	5.2	73.4	33.0	40.5	164.8	30.2	0.5
Queue Length 50th (ft)	42	380	6	144	257	11	37	76	301	~101	31	0
Queue Length 95th (ft)	m59	#464	m12	#247	371	m42	65	105	380	#181	50	0
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	190	1373	590	400	1691	696	160	1235	1128	171	1257	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.88	0.15	0.78	0.74	0.26	0.54	0.19	0.79	1.14	0.08	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1104	82	285	1141	164	78	216	807	177	92	74
Future Volume (veh/h)	89	1104	82	285	1141	164	78	216	807	177	92	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	1213	90	313	1254	180	86	237	887	195	101	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	155	1385	483	308	1629	554	152	1199	941	167	1228	548
Arrive On Green	0.09	0.61	0.61	0.18	0.70	0.70	0.04	0.34	0.34	0.05	0.35	0.35
Sat Flow, veh/h	3456	4540	1585	3456	4661	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	98	1213	90	313	1254	180	86	237	887	195	101	81
Grp Sat Flow(s),veh/h/ln	1728	1513	1585	1728	1554	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	3.6	29.1	3.2	11.6	22.8	5.8	3.2	6.2	40.2	6.3	2.5	4.6
Cycle Q Clear(g_c), s	3.6	29.1	3.2	11.6	22.8	5.8	3.2	6.2	40.2	6.3	2.5	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	1385	483	308	1629	554	152	1199	941	167	1228	548
V/C Ratio(X)	0.63	0.88	0.19	1.02	0.77	0.33	0.56	0.20	0.94	1.16	0.08	0.15
Avail Cap(c_a), veh/h	162	1385	483	308	1629	554	159	1241	974	167	1263	563
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	23.3	18.3	53.4	16.2	13.6	60.9	30.6	41.9	61.8	28.7	29.3
Incr Delay (d2), s/veh	4.3	4.9	0.5	46.4	2.5	1.1	4.2	0.1	16.5	120.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.7	1.2	6.4	4.8	1.9	1.5	2.6	15.4	5.5	1.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	28.2	18.7	99.8	18.7	14.7	65.1	30.7	58.3	182.5	28.7	29.5
LnGrp LOS	E	C	B	F	B	B	E	C	E	F	C	C
Approach Vol, veh/h		1401			1747			1210			377	
Approach Delay, s/veh		30.0			32.8			53.4			108.4	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	52.5	12.6	51.5	19.1	46.7	13.7	50.5
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	6.1	43.6	6.0	46.2	11.6	38.1	6.3	45.4
Max Q Clear Time (g_c+I1), s	5.6	24.8	5.2	6.6	13.6	31.1	8.3	42.2
Green Ext Time (p_c), s	0.0	13.6	0.0	0.9	0.0	5.6	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	43.2
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	311.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	225	365	396	140	145	106
Future Vol, veh/h	225	365	396	140	145	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	3	2	2	3	5	5
Mvmt Flow	369	598	649	230	238	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	879	0	-	0	1985	649
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	1336	-
Critical Hdwy	4.13	-	-	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.227	-	-	-	3.545	3.345
Pot Cap-1 Maneuver	764	-	-	-	~ 66	464
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	242	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	764	-	-	-	~ 34	464
Mov Cap-2 Maneuver	-	-	-	-	~ 34	-
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	242	-

Approach	EB	WB	SB
HCM Control Delay, s	5.4	0	$ 1697.2
HCM LOS			F

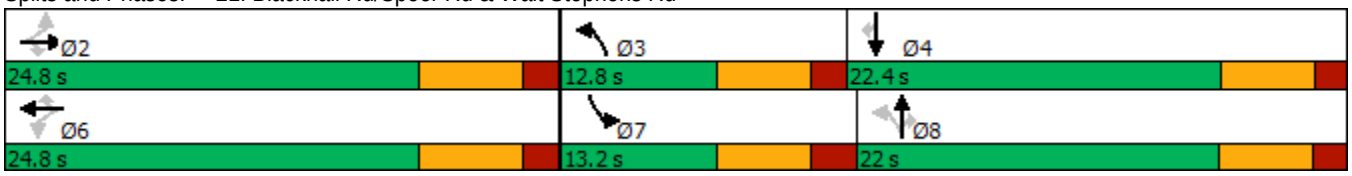
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	764	-	-	-	34	464
HCM Lane V/C Ratio	0.483	-	-	-	6.991	0.375
HCM Control Delay (s)	14	-	-	-	$ 2925.3	17.3
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	2.7	-	-	-	28.6	1.7

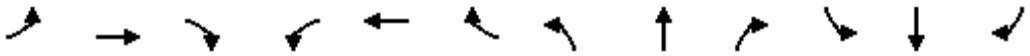
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	359	59	139	370	661	52	399	121	249	84	16
Future Volume (vph)	34	359	59	139	370	661	52	399	121	249	84	16
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8			4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	24.8	24.8	24.8	24.8	24.8	24.8	12.8	22.0	22.0	13.2	22.4	22.4
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%	41.3%	21.3%	36.7%	36.7%	22.0%	37.3%	37.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	18.1	18.1	18.1	18.1	18.1	18.1	22.8	15.8	15.8	7.0	21.5	21.5
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.39	0.27	0.27	0.12	0.36	0.36
v/c Ratio	0.21	0.71	0.11	0.81	0.74	0.55	0.10	0.90	0.25	0.69	0.14	0.03
Control Delay	18.9	26.7	0.4	53.8	28.4	3.5	9.0	46.0	3.7	36.0	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	26.7	0.4	53.8	28.4	3.5	9.0	46.0	3.7	36.0	16.4	0.1
LOS	B	C	A	D	C	A	A	D	A	D	B	A
Approach Delay		22.7			17.3			33.7			29.6	
Approach LOS		C			B			C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 59.2	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd

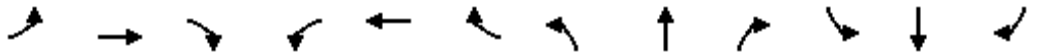




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	403	66	156	416	743	58	448	136	280	94	18
v/c Ratio	0.21	0.71	0.11	0.81	0.74	0.55	0.10	0.90	0.25	0.69	0.14	0.03
Control Delay	18.9	26.7	0.4	53.8	28.4	3.5	9.0	46.0	3.7	36.0	16.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	26.7	0.4	53.8	28.4	3.5	9.0	46.0	3.7	36.0	16.4	0.1
Queue Length 50th (ft)	10	127	0	51	132	2	10	155	0	51	26	0
Queue Length 95th (ft)	31	#218	0	#142	#247	36	26	#302	25	#95	56	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	189	582	601	198	576	1363	555	510	552	405	677	680
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.69	0.11	0.79	0.72	0.55	0.10	0.88	0.25	0.69	0.14	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	359	59	139	370	661	52	399	121	249	84	16
Future Volume (veh/h)	34	359	59	139	370	661	52	399	121	249	84	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	403	66	156	416	743	58	448	136	280	94	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	174	580	492	231	575	858	592	499	423	402	594	503
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.27	0.27	0.12	0.32	0.32
Sat Flow, veh/h	485	1870	1585	917	1856	2768	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	38	403	66	156	416	743	58	448	136	280	94	18
Grp Sat Flow(s),veh/h/ln	485	1870	1585	917	1856	1384	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	4.5	11.3	1.8	7.2	11.9	15.1	1.3	13.8	4.1	4.6	2.2	0.5
Cycle Q Clear(g_c), s	16.4	11.3	1.8	18.5	11.9	15.1	1.3	13.8	4.1	4.6	2.2	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	580	492	231	575	858	592	499	423	402	594	503
V/C Ratio(X)	0.22	0.69	0.13	0.67	0.72	0.87	0.10	0.90	0.32	0.70	0.16	0.04
Avail Cap(c_a), veh/h	174	580	492	231	575	858	672	508	430	406	594	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	18.1	14.8	27.3	18.3	19.4	13.5	21.1	17.5	25.4	14.6	14.1
Incr Delay (d2), s/veh	1.3	4.6	0.3	9.8	5.5	9.9	0.1	18.4	0.4	5.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.8	0.6	2.7	5.1	5.2	0.5	7.6	1.3	2.0	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	22.7	15.1	37.1	23.8	29.3	13.5	39.5	18.0	30.5	14.8	14.1
LnGrp LOS	C	C	B	D	C	C	B	D	B	C	B	B
Approach Vol, veh/h		507			1315			642			392	
Approach Delay, s/veh		22.0			28.5			32.6			26.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	10.1	24.7		24.8	13.1	21.7				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 19	* 7	* 17		* 19	7.0	* 16				
Max Q Clear Time (g_c+I1), s		18.4	3.3	4.2		20.5	6.6	15.8				
Green Ext Time (p_c), s		0.0	0.0	0.3		0.0	0.0	0.1				

Intersection Summary												
HCM 6th Ctrl Delay			27.9									
HCM 6th LOS			C									

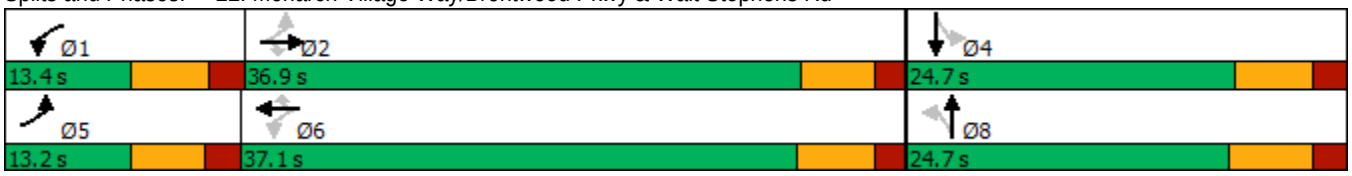
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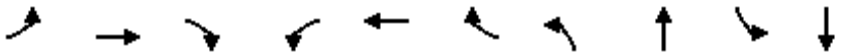
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	26	556	68	102	834	52	187	29	78	36
Future Volume (vph)	26	556	68	102	834	52	187	29	78	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	36.9	36.9	13.4	37.1	37.1	24.7	24.7	24.7	24.7
Total Split (%)	17.6%	49.2%	49.2%	17.9%	49.5%	49.5%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	35.9	30.8	30.8	38.2	35.9	35.9	15.6	15.6	15.9	15.9
Actuated g/C Ratio	0.52	0.44	0.44	0.55	0.52	0.52	0.22	0.22	0.23	0.23
v/c Ratio	0.11	0.76	0.10	0.33	0.99	0.07	0.77	0.40	0.33	0.32
Control Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
LOS	A	C	A	A	D	A	D	A	C	B
Approach Delay		22.8			43.0			28.8		16.9
Approach LOS		C			D			C		B

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 69.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 32.3	Intersection LOS: C
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd

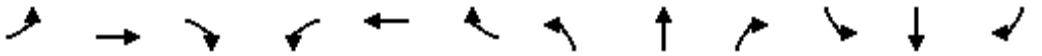




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	632	77	116	948	59	213	194	89	149
v/c Ratio	0.11	0.76	0.10	0.33	0.99	0.07	0.77	0.40	0.33	0.32
Control Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	26.2	0.6	9.9	49.8	0.2	46.6	9.2	27.3	10.6
Queue Length 50th (ft)	5	252	0	22	336	0	91	12	34	15
Queue Length 95th (ft)	15	#418	3	42	#752	0	#184	59	72	56
Internal Link Dist (ft)		2243			4466			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	273	847	798	349	955	881	324	549	312	523
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.75	0.10	0.33	0.99	0.07	0.66	0.35	0.29	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	556	68	102	834	52	187	29	142	78	36	95
Future Volume (veh/h)	26	556	68	102	834	52	187	29	142	78	36	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	632	77	116	948	59	212	33	161	89	41	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	179	730	618	315	811	687	322	70	341	281	115	303
Arrive On Green	0.04	0.39	0.39	0.09	0.44	0.44	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1767	1856	1572	1239	277	1350	1189	455	1199
Grp Volume(v), veh/h	30	632	77	116	948	59	212	0	194	89	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	1856	1572	1239	0	1627	1189	0	1654
Q Serve(g_s), s	0.7	22.2	2.2	2.6	31.2	1.6	12.1	0.0	7.2	4.9	0.0	5.3
Cycle Q Clear(g_c), s	0.7	22.2	2.2	2.6	31.2	1.6	17.4	0.0	7.2	12.1	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		0.72
Lane Grp Cap(c), veh/h	179	730	618	315	811	687	322	0	411	281	0	418
V/C Ratio(X)	0.17	0.87	0.12	0.37	1.17	0.09	0.66	0.00	0.47	0.32	0.00	0.36
Avail Cap(c_a), veh/h	276	813	689	332	811	687	322	0	411	286	0	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	20.0	13.9	14.5	20.1	11.7	29.0	0.0	22.6	27.8	0.0	21.9
Incr Delay (d2), s/veh	0.2	10.4	0.2	0.3	89.0	0.1	4.9	0.0	0.8	0.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	10.2	0.7	0.9	31.0	0.5	3.9	0.0	2.8	1.4	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	30.4	14.1	14.8	109.0	11.8	33.9	0.0	23.5	28.4	0.0	22.4
LnGrp LOS	B	C	B	B	F	B	C	A	C	C	A	C
Approach Vol, veh/h		739			1123			406			238	
Approach Delay, s/veh		28.2			94.2			28.9			24.7	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	33.9		24.7	9.3	37.3		24.7				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 31		* 18	7.0	* 31		18.0				
Max Q Clear Time (g_c+I1), s	4.6	24.2		14.1	2.7	33.2		19.4				
Green Ext Time (p_c), s	0.0	3.6		0.4	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		57.5	
HCM 6th LOS		E	

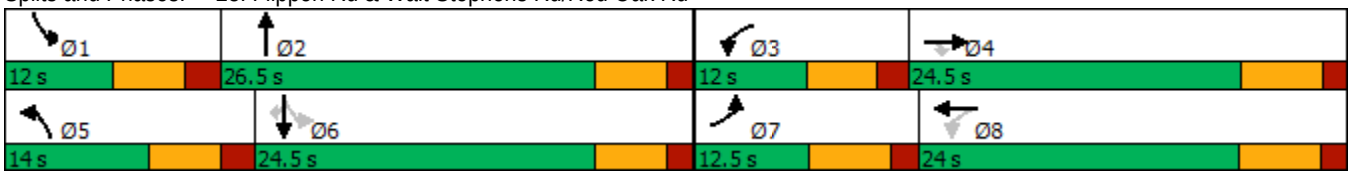
Notes

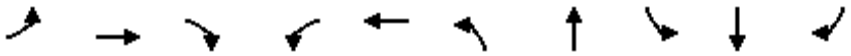
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	279	201	490	22	264	421	399	23	337	349
Future Volume (vph)	279	201	490	22	264	421	399	23	337	349
Turn Type	Prot	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			4	8				6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.5	24.5	24.5	12.0	24.0	14.0	26.5	12.0	24.5	24.5
Total Split (%)	16.7%	32.7%	32.7%	16.0%	32.0%	18.7%	35.3%	16.0%	32.7%	32.7%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	6.4	24.0	24.0	22.2	15.8	8.1	24.6	20.6	15.0	15.0
Actuated g/C Ratio	0.09	0.35	0.35	0.32	0.23	0.12	0.36	0.30	0.22	0.22
v/c Ratio	0.97	0.35	0.62	0.06	0.78	1.17	0.37	0.08	0.50	0.43
Control Delay	80.2	21.4	7.3	13.3	39.2	133.6	19.3	13.5	26.5	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.2	21.4	7.3	13.3	39.2	133.6	19.3	13.5	26.5	4.5
LOS	F	C	A	B	D	F	B	B	C	A
Approach Delay		31.2			37.4		76.7		15.2	
Approach LOS		C			D		E		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 69.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



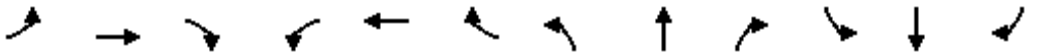


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	310	223	544	24	325	468	463	26	374	388
v/c Ratio	0.97	0.35	0.62	0.06	0.78	1.17	0.37	0.08	0.50	0.43
Control Delay	80.2	21.4	7.3	13.3	39.2	133.6	19.3	13.5	26.5	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.2	21.4	7.3	13.3	39.2	133.6	19.3	13.5	26.5	4.5
Queue Length 50th (ft)	~73	62	12	6	128	~134	69	7	76	0
Queue Length 95th (ft)	#157	152	113	20	#250	#231	135	20	116	34
Internal Link Dist (ft)		1821			3175		1869		1314	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	319	644	872	423	478	399	1275	338	954	1032
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.35	0.62	0.06	0.68	1.17	0.36	0.08	0.39	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	201	490	22	264	29	421	399	18	23	337	349
Future Volume (veh/h)	279	201	490	22	264	29	421	399	18	23	337	349
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	310	223	0	24	293	32	468	443	20	26	374	388
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	330	522		373	348	38	412	1052	47	352	766	601
Arrive On Green	0.10	0.28	0.00	0.03	0.21	0.21	0.12	0.30	0.30	0.03	0.22	0.22
Sat Flow, veh/h	3456	1870	1585	1767	1644	180	3456	3463	156	1753	3497	2745
Grp Volume(v), veh/h	310	223	0	24	0	325	468	227	236	26	374	388
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1767	0	1823	1728	1777	1842	1753	1749	1373
Q Serve(g_s), s	6.0	6.5	0.0	0.7	0.0	11.5	8.0	6.8	6.9	0.8	6.3	8.6
Cycle Q Clear(g_c), s	6.0	6.5	0.0	0.7	0.0	11.5	8.0	6.8	6.9	0.8	6.3	8.6
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	330	522		373	0	386	412	540	560	352	766	601
V/C Ratio(X)	0.94	0.43		0.06	0.00	0.84	1.14	0.42	0.42	0.07	0.49	0.65
Avail Cap(c_a), veh/h	330	522		479	0	487	412	554	574	448	985	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	19.8	0.0	19.5	0.0	25.4	29.5	18.6	18.6	19.0	22.9	23.8
Incr Delay (d2), s/veh	34.2	0.6	0.0	0.1	0.0	10.4	86.7	1.1	1.1	0.1	1.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	2.6	0.0	0.3	0.0	5.7	8.0	2.6	2.7	0.3	2.4	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.4	20.3	0.0	19.5	0.0	35.8	116.3	19.7	19.7	19.1	23.9	26.3
LnGrp LOS	E	C		B	A	D	F	B	B	B	C	C
Approach Vol, veh/h		533	A		349			931			788	
Approach Delay, s/veh		46.0			34.7			68.3			25.0	
Approach LOS		D			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	26.0	8.0	24.8	14.0	20.3	12.5	20.3
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 21	* 6.2	* 19	8.0	* 19	* 6.4	* 18
Max Q Clear Time (g_c+I1), s	2.8	8.9	2.7	8.5	10.0	10.6	8.0	13.5
Green Ext Time (p_c), s	0.0	3.4	0.0	0.7	0.0	4.1	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	203	62	15	448	60	84	8	21	18	5	53
Future Vol, veh/h	37	203	62	15	448	60	84	8	21	18	5	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	216	66	16	477	64	89	9	22	19	5	56
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	11.3	14.3	12.7	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	74%	100%	0%	0%	100%	0%	0%	78%	0%
Vol Thru, %	7%	0%	100%	52%	0%	100%	71%	22%	0%
Vol Right, %	19%	0%	0%	48%	0%	0%	29%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	37	135	130	15	299	209	23	53
LT Vol	84	37	0	0	15	0	0	18	0
Through Vol	8	0	135	68	0	299	149	5	0
RT Vol	21	0	0	62	0	0	60	0	53
Lane Flow Rate	120	39	144	138	16	318	223	24	56
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.248	0.078	0.264	0.24	0.029	0.543	0.368	0.053	0.104
Departure Headway (Hd)	7.42	7.101	6.595	6.255	6.655	6.15	5.947	7.766	6.667
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	482	503	543	571	536	585	604	459	534
Service Time	5.197	4.868	4.361	4.022	4.414	3.908	3.705	5.553	4.453
HCM Lane V/C Ratio	0.249	0.078	0.265	0.242	0.03	0.544	0.369	0.052	0.105
HCM Control Delay	12.7	10.5	11.7	11	9.6	16	12.2	11	10.2
HCM Lane LOS	B	B	B	B	A	C	B	B	B
HCM 95th-tile Q	1	0.3	1.1	0.9	0.1	3.2	1.7	0.2	0.3

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	0	22	21	0	85	8	720	8	38	558	24
Future Vol, veh/h	38	0	22	21	0	85	8	720	8	38	558	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	4	4	0
Mvmt Flow	42	0	24	23	0	94	9	800	9	42	620	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1574	1531	620	1548	1549	800	647	0	0	809	0	0
Stage 1	704	704	-	818	818	-	-	-	-	-	-	-
Stage 2	870	827	-	730	731	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	90	118	492	93	115	385	948	-	-	808	-	-
Stage 1	431	443	-	370	393	-	-	-	-	-	-	-
Stage 2	349	389	-	414	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	111	492	84	108	385	948	-	-	808	-	-
Mov Cap-2 Maneuver	65	111	-	84	108	-	-	-	-	-	-	-
Stage 1	427	420	-	367	389	-	-	-	-	-	-	-
Stage 2	261	385	-	373	408	-	-	-	-	-	-	-

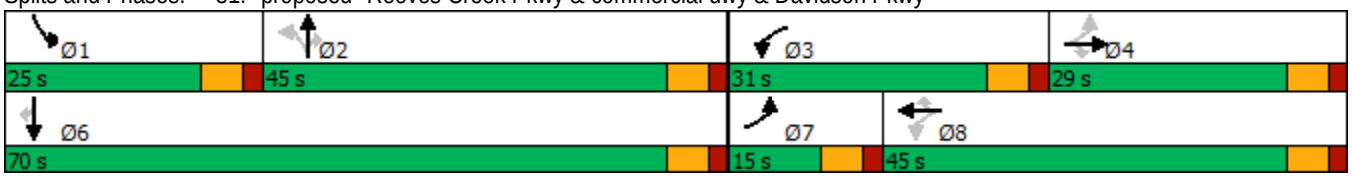
Approach	EB	WB	NB	SB
HCM Control Delay, s	87.8	26.6	0.1	0.6
HCM LOS	F	D		

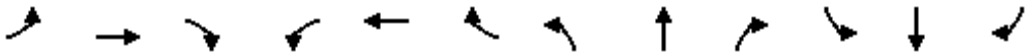
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	948	-	-	65	492	84	385	808	-	-
HCM Lane V/C Ratio	0.009	-	-	0.65	0.05	0.278	0.245	0.052	-	-
HCM Control Delay (s)	8.8	-	-	131.2	12.7	63.6	17.4	9.7	-	-
HCM Lane LOS	A	-	-	F	B	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.8	0.2	1	0.9	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	28	9	217	53	316	18	455	84	191	807	133
Future Volume (vph)	70	28	9	217	53	316	18	455	84	191	807	133
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	20.0	11.0	20.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	15.0	29.0	29.0	31.0	45.0	45.0	45.0	45.0	45.0	25.0	70.0	70.0
Total Split (%)	11.5%	22.3%	22.3%	23.8%	34.6%	34.6%	34.6%	34.6%	34.6%	19.2%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	12.9	7.2	7.2	26.5	15.1	15.1	47.0	47.0	47.0	11.5	64.6	64.6
Actuated g/C Ratio	0.12	0.07	0.07	0.26	0.15	0.15	0.46	0.46	0.46	0.11	0.63	0.63
v/c Ratio	0.36	0.23	0.04	0.64	0.21	0.66	0.07	0.31	0.11	0.54	0.40	0.14
Control Delay	35.6	52.6	0.2	39.8	41.2	10.6	22.0	20.7	0.3	50.0	11.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	52.6	0.2	39.8	41.2	10.6	22.0	20.7	0.3	50.0	11.7	2.2
LOS	D	D	A	D	D	B	C	C	A	D	B	A
Approach Delay		37.1			24.2			17.7			17.0	
Approach LOS		D			C			B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 103.2	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	31	10	241	59	351	20	506	93	212	897	148
v/c Ratio	0.36	0.23	0.04	0.64	0.21	0.66	0.07	0.31	0.11	0.54	0.40	0.14
Control Delay	35.6	52.6	0.2	39.8	41.2	10.6	22.0	20.7	0.3	50.0	11.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	52.6	0.2	39.8	41.2	10.6	22.0	20.7	0.3	50.0	11.7	2.2
Queue Length 50th (ft)	40	20	0	135	36	0	8	115	0	71	158	0
Queue Length 95th (ft)	76	53	0	208	74	80	28	189	0	114	245	28
Internal Link Dist (ft)		299			1001			915			1620	
Turn Bay Length (ft)												
Base Capacity (vph)	232	427	499	477	724	832	274	1645	831	650	2259	1065
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.07	0.02	0.51	0.08	0.42	0.07	0.31	0.11	0.33	0.40	0.14

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	28	9	217	53	316	18	455	84	191	807	133
Future Volume (veh/h)	70	28	9	217	53	316	18	455	84	191	807	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	31	10	241	59	351	20	506	93	212	897	148
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	310	305	259	498	456	387	286	1525	680	283	2003	894
Arrive On Green	0.05	0.16	0.16	0.13	0.24	0.24	0.42	0.42	0.42	0.08	0.55	0.55
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	548	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	78	31	10	241	59	351	20	506	93	212	897	148
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	548	1805	1610	1755	1805	1610
Q Serve(g_s), s	4.1	1.6	0.6	12.3	2.8	24.4	2.6	10.9	4.1	6.8	17.0	5.2
Cycle Q Clear(g_c), s	4.1	1.6	0.6	12.3	2.8	24.4	4.3	10.9	4.1	6.8	17.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	305	259	498	456	387	286	1525	680	283	2003	894
V/C Ratio(X)	0.25	0.10	0.04	0.48	0.13	0.91	0.07	0.33	0.14	0.75	0.45	0.17
Avail Cap(c_a), veh/h	363	379	321	659	643	545	286	1525	680	578	2003	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	41.3	40.9	32.1	34.4	42.6	21.0	22.4	20.4	51.9	15.2	12.6
Incr Delay (d2), s/veh	0.4	0.1	0.1	0.7	0.1	15.0	0.5	0.6	0.4	4.0	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.8	0.2	5.4	1.3	11.1	0.4	4.5	1.6	3.2	7.1	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	41.4	40.9	32.8	34.5	57.5	21.5	23.0	20.8	55.8	15.9	13.0
LnGrp LOS	D	D	D	C	C	E	C	C	C	E	B	B
Approach Vol, veh/h		119			651			619			1257	
Approach Delay, s/veh		39.2			46.3			22.6			22.3	
Approach LOS		D			D			C			C	

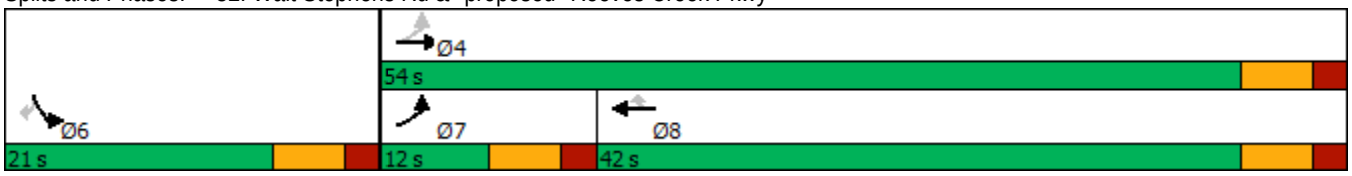
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	15.3	54.7	20.8	24.5		70.0	11.6	33.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	19.0	39.0	25.0	23.0		64.0	9.0	39.0				
Max Q Clear Time (g_c+I1), s	8.8	12.9	14.3	3.6		19.0	6.1	26.4				
Green Ext Time (p_c), s	0.5	3.7	0.5	0.1		9.1	0.0	1.3				

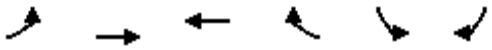
Intersection Summary												
HCM 6th Ctrl Delay			29.0									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	653	738	298	121	89
Future Volume (vph)	193	653	738	298	121	89
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	54.0	42.0	42.0	21.0	21.0
Total Split (%)	16.0%	72.0%	56.0%	56.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	Min	Min
Act Effct Green (s)	45.1	45.1	32.9	32.9	10.4	10.4
Actuated g/C Ratio	0.67	0.67	0.49	0.49	0.15	0.15
v/c Ratio	0.78	0.57	0.89	0.35	0.48	0.30
Control Delay	32.8	8.7	29.9	2.5	33.2	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	8.7	29.9	2.5	33.2	8.9
LOS	C	A	C	A	C	A
Approach Delay		14.2	22.0		22.9	
Approach LOS		B	C		C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 67.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 32: Walt Stephens Rd & *proposed* Reeves Creek Pkwy

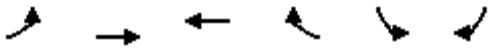




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	214	726	820	331	134	99
v/c Ratio	0.78	0.57	0.89	0.35	0.48	0.30
Control Delay	32.8	8.7	29.9	2.5	33.2	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	8.7	29.9	2.5	33.2	8.9
Queue Length 50th (ft)	34	135	286	0	54	0
Queue Length 95th (ft)	#158	264	#567	39	103	37
Internal Link Dist (ft)		4466	1821		927	
Turn Bay Length (ft)						
Base Capacity (vph)	275	1367	1025	1024	406	439
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.53	0.80	0.32	0.33	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	193	653	738	298	121	89
Future Volume (veh/h)	193	653	738	298	121	89
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	214	726	820	331	134	99
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	333	1301	949	804	203	180
Arrive On Green	0.08	0.68	0.50	0.50	0.11	0.11
Sat Flow, veh/h	1810	1900	1900	1610	1810	1610
Grp Volume(v), veh/h	214	726	820	331	134	99
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1810	1610
Q Serve(g_s), s	3.0	11.5	22.4	7.6	4.2	3.4
Cycle Q Clear(g_c), s	3.0	11.5	22.4	7.6	4.2	3.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	333	1301	949	804	203	180
V/C Ratio(X)	0.64	0.56	0.86	0.41	0.66	0.55
Avail Cap(c_a), veh/h	365	1544	1158	982	460	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	4.7	13.0	9.3	25.1	24.8
Incr Delay (d2), s/veh	3.4	0.4	5.9	0.3	3.7	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.0	8.3	2.0	1.8	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.7	5.1	19.0	9.6	28.8	27.4
LnGrp LOS	B	A	B	A	C	C
Approach Vol, veh/h		940	1151		233	
Approach Delay, s/veh		7.5	16.3		28.2	
Approach LOS		A	B		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	46.4	12.6	10.9	35.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	48.0	15.0	6.0	36.0
Max Q Clear Time (g_c+I1), s	13.5	6.2	5.0	24.4
Green Ext Time (p_c), s	5.2	0.4	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	48	37	0	4	18	676	15	2	582	23
Future Vol, veh/h	61	0	48	37	0	4	18	676	15	2	582	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	0	53	41	0	4	20	751	17	2	647	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1453	1459	647	1482	1468	751	673	0	0	768	0	0
Stage 1	651	651	-	791	791	-	-	-	-	-	-	-
Stage 2	802	808	-	691	677	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	109	131	475	104	129	414	927	-	-	855	-	-
Stage 1	461	468	-	386	404	-	-	-	-	-	-	-
Stage 2	381	397	-	438	455	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	128	475	90	126	414	927	-	-	855	-	-
Mov Cap-2 Maneuver	106	128	-	90	126	-	-	-	-	-	-	-
Stage 1	451	466	-	378	395	-	-	-	-	-	-	-
Stage 2	369	388	-	387	453	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	53.9	69	0.2	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	927	-	-	106	475	90	414	855	-	-
HCM Lane V/C Ratio	0.022	-	-	0.639	0.112	0.457	0.011	0.003	-	-
HCM Control Delay (s)	9	-	-	85.7	13.5	75	13.8	9.2	0	-
HCM Lane LOS	A	-	-	F	B	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	0.4	1.9	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1281	925	328	715	551	491
Future Volume (vph)	1281	925	328	715	551	491
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	8.0	15.0	8.0	8.0
Minimum Split (s)	22.3	22.3	14.1	22.3	15.1	15.1
Total Split (s)	66.4	66.4	28.4	94.8	55.2	55.2
Total Split (%)	44.3%	44.3%	18.9%	63.2%	36.8%	36.8%
Yellow Time (s)	5.0	5.0	3.6	5.0	4.6	4.6
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	6.1	7.3	7.1	7.1
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	66.9	66.9	22.1	95.1	40.5	40.5
Actuated g/C Ratio	0.45	0.45	0.15	0.63	0.27	0.27
v/c Ratio	1.07	0.64	0.82	0.40	0.79	0.53
Control Delay	86.6	3.7	77.1	14.9	58.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.6	3.7	77.1	14.9	58.7	4.9
LOS	F	A	E	B	E	A
Approach Delay	51.8			34.5	33.3	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 43.1	Intersection LOS: D
Intersection Capacity Utilization 77.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SR 42/US 23/N Henry Blvd & SR 42-138/US 23/N Henry Blvd/SR 138





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1392	1005	357	777	599	534
v/c Ratio	1.07	0.64	0.82	0.40	0.79	0.53
Control Delay	86.6	3.7	77.1	14.9	58.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.6	3.7	77.1	14.9	58.7	4.9
Queue Length 50th (ft)	~809	0	175	186	281	0
Queue Length 95th (ft)	#1014	46	#248	264	330	45
Internal Link Dist (ft)	3662			795	468	
Turn Bay Length (ft)		475	200			375
Base Capacity (vph)	1297	1578	460	1939	898	1091
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.64	0.78	0.40	0.67	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1281	925	328	715	551	491
Future Volume (veh/h)	1281	925	328	715	551	491
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1544	1544	1633	1633	1530	1530
Adj Flow Rate, veh/h	1392	1005	357	777	599	534
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	24	18	18	25	25
Cap, veh/h	1346	1056	399	1960	770	621
Arrive On Green	0.46	0.46	0.13	0.63	0.27	0.27
Sat Flow, veh/h	3011	2303	3018	3185	2826	2281
Grp Volume(v), veh/h	1392	1005	357	777	599	534
Grp Sat Flow(s),veh/h/ln	1467	1152	1509	1552	1413	1141
Q Serve(g_s), s	68.8	62.9	17.5	18.5	29.4	33.4
Cycle Q Clear(g_c), s	68.8	62.9	17.5	18.5	29.4	33.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1346	1056	399	1960	770	621
V/C Ratio(X)	1.03	0.95	0.89	0.40	0.78	0.86
Avail Cap(c_a), veh/h	1346	1056	449	1960	906	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	39.0	64.1	13.6	50.4	51.8
Incr Delay (d2), s/veh	33.8	18.2	18.7	0.6	4.2	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.4	19.2	7.6	6.3	10.4	20.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.4	57.2	82.7	14.2	54.6	61.5
LnGrp LOS	F	E	F	B	D	E
Approach Vol, veh/h	2397			1134	1133	
Approach Delay, s/veh	67.2			35.8	57.8	
Approach LOS	E			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		102.0		48.0	25.9	76.1
Change Period (Y+Rc), s		* 7.3		7.1	6.1	* 7.3
Max Green Setting (Gmax), s		* 88		48.1	22.3	* 59
Max Q Clear Time (g_c+I1), s		20.5		35.4	19.5	70.8
Green Ext Time (p_c), s		12.9		5.5	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	57.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1963	350	372	1190	379	531
Future Volume (vph)	1963	350	372	1190	379	531
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases		6				4
Detector Phase	6	6	5	2	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	6.0	12.0	20.0	20.0
Minimum Split (s)	18.1	18.1	12.0	18.1	26.9	26.9
Total Split (s)	90.0	90.0	23.0	113.0	37.0	37.0
Total Split (%)	60.0%	60.0%	15.3%	75.3%	24.7%	24.7%
Yellow Time (s)	3.8	3.8	3.5	3.8	4.4	4.4
All-Red Time (s)	2.3	2.3	2.5	2.3	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.0	6.1	6.9	6.9
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	85.4	85.4	20.2	111.6	25.4	25.4
Actuated g/C Ratio	0.57	0.57	0.13	0.74	0.17	0.17
v/c Ratio	0.85	0.34	0.84	0.57	0.68	0.74
Control Delay	29.3	3.9	79.7	10.3	64.3	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	3.9	79.7	10.3	64.3	28.8
LOS	C	A	E	B	E	C
Approach Delay	25.4			26.8	43.6	
Approach LOS	C			C	D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 31 (21%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Rock Quarry Rd & SR 42-138/US 23/N Henry Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2045	365	388	1240	395	553
v/c Ratio	0.85	0.34	0.84	0.57	0.68	0.74
Control Delay	29.3	3.9	79.7	10.3	64.3	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	3.9	79.7	10.3	64.3	28.8
Queue Length 50th (ft)	513	25	192	261	188	117
Queue Length 95th (ft)	627	m37	#310	352	238	187
Internal Link Dist (ft)	981			3526	320	
Turn Bay Length (ft)		775	100			
Base Capacity (vph)	2400	1058	461	2165	688	826
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.34	0.84	0.57	0.57	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1963	350	372	1190	379	531
Future Volume (veh/h)	1963	350	372	1190	379	531
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1559	1870	1870	1544	1870	1870
Adj Flow Rate, veh/h	2045	365	388	1240	395	553
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	23	2	2	24	2	2
Cap, veh/h	2381	887	392	2091	693	560
Arrive On Green	1.00	1.00	0.11	0.71	0.20	0.20
Sat Flow, veh/h	4397	1585	3456	3011	3456	2790
Grp Volume(v), veh/h	2045	365	388	1240	395	553
Grp Sat Flow(s),veh/h/ln	1419	1585	1728	1467	1728	1395
Q Serve(g_s), s	0.0	0.0	16.8	31.5	15.5	29.6
Cycle Q Clear(g_c), s	0.0	0.0	16.8	31.5	15.5	29.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2381	887	392	2091	693	560
V/C Ratio(X)	0.86	0.41	0.99	0.59	0.57	0.99
Avail Cap(c_a), veh/h	2381	887	392	2091	693	560
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	66.4	10.7	54.1	59.8
Incr Delay (d2), s/veh	1.4	0.4	42.8	1.2	1.4	34.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	9.6	9.4	6.9	23.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.4	0.4	109.2	12.0	55.5	94.6
LnGrp LOS	A	A	F	B	E	F
Approach Vol, veh/h	2410			1628	948	
Approach Delay, s/veh	1.2			35.2	78.3	
Approach LOS	A			D	E	

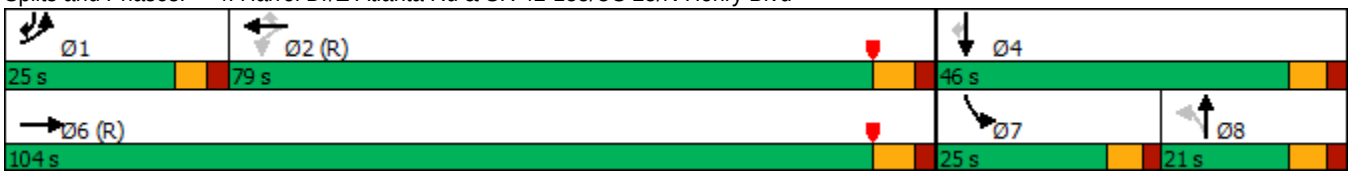
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.0		37.0	23.0	90.0
Change Period (Y+Rc), s		6.1		6.9	6.0	6.1
Max Green Setting (Gmax), s		106.9		30.1	17.0	83.9
Max Q Clear Time (g_c+I1), s		33.5		31.6	18.8	2.0
Green Ext Time (p_c), s		36.9		0.0	0.0	68.4

Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	432	1853	18	1234	340	30	41	395	5	280
Future Volume (vph)	432	1853	18	1234	340	30	41	395	5	280
Turn Type	Prot	NA	Perm	NA	Perm	Perm	NA	Prot	NA	pm+ov
Protected Phases	1	6		2			8	7	4	1
Permitted Phases			2		2	8				4
Detector Phase	1	6	2	2	2	8	8	7	4	1
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	12.0	12.0	8.0	8.0	5.0	8.0	6.0
Minimum Split (s)	12.0	19.1	19.1	19.1	19.1	14.7	14.7	11.0	14.7	12.0
Total Split (s)	25.0	104.0	79.0	79.0	79.0	21.0	21.0	25.0	46.0	25.0
Total Split (%)	16.7%	69.3%	52.7%	52.7%	52.7%	14.0%	14.0%	16.7%	30.7%	16.7%
Yellow Time (s)	3.5	4.6	4.6	4.6	4.6	4.2	4.2	4.0	4.2	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.1	7.1	7.1	7.1		6.7	6.0	6.7	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes		Yes
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	19.0	96.9	71.9	71.9	71.9		14.3	19.0	39.3	65.0
Actuated g/C Ratio	0.13	0.65	0.48	0.48	0.48		0.10	0.13	0.26	0.43
v/c Ratio	1.19	1.02	0.39	0.64	0.44		0.93	0.95	0.01	0.42
Control Delay	161.1	36.3	52.8	31.8	6.2		112.4	96.1	41.2	28.3
Queue Delay	0.0	31.9	0.0	0.0	0.0		2.1	4.5	0.0	0.0
Total Delay	161.1	68.2	52.8	31.8	6.2		114.5	100.6	41.2	28.3
LOS	F	E	D	C	A		F	F	D	C
Approach Delay		85.6		26.6			114.5		70.4	
Approach LOS		F		C			F		E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 64.5	Intersection LOS: E
Intersection Capacity Utilization 104.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Harrel Dr/E Atlanta Rd & SR 42-138/US 23/N Henry Blvd





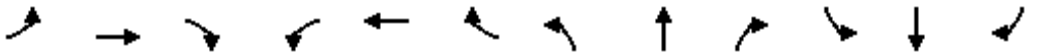
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	450	1946	19	1285	354	158	411	5	292
v/c Ratio	1.19	1.02	0.39	0.64	0.44	0.93	0.95	0.01	0.42
Control Delay	161.1	36.3	52.8	31.8	6.2	112.4	96.1	41.2	28.3
Queue Delay	0.0	31.9	0.0	0.0	0.0	2.1	4.5	0.0	0.0
Total Delay	161.1	68.2	52.8	31.8	6.2	114.5	100.6	41.2	28.3
Queue Length 50th (ft)	~270	~1083	13	328	21	139	208	4	175
Queue Length 95th (ft)	m#357	#1222	m24	385	75	#285	#313	15	258
Internal Link Dist (ft)		3939		643		194		367	
Turn Bay Length (ft)	150		100						
Base Capacity (vph)	379	1909	49	2021	813	169	434	488	702
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	306	0	0	0	2	12	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	1.21	0.39	0.64	0.44	0.95	0.97	0.01	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	432	1853	15	18	1234	340	30	41	81	395	5	280
Future Volume (veh/h)	432	1853	15	18	1234	340	30	41	81	395	5	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1574	1574	1870	1559	1559	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	450	1930	16	19	1285	354	31	43	84	411	5	292
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	22	22	2	23	23	2	2	2	2	2	2
Cap, veh/h	386	1964	16	54	2040	633	51	47	79	438	490	616
Arrive On Green	0.13	0.65	0.65	0.96	0.96	0.96	0.10	0.10	0.10	0.13	0.26	0.26
Sat Flow, veh/h	3045	3040	25	227	4256	1321	230	498	826	3456	1870	1585
Grp Volume(v), veh/h	450	948	998	19	1285	354	158	0	0	411	5	292
Grp Sat Flow(s),veh/h/ln	1522	1495	1569	227	1419	1321	1554	0	0	1728	1870	1585
Q Serve(g_s), s	19.0	92.0	92.7	4.2	4.7	3.6	11.1	0.0	0.0	17.7	0.3	20.7
Cycle Q Clear(g_c), s	19.0	92.0	92.7	71.9	4.7	3.6	14.3	0.0	0.0	17.7	0.3	20.7
Prop In Lane	1.00		0.02	1.00		1.00	0.20		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	386	966	1014	54	2040	633	177	0	0	438	490	616
V/C Ratio(X)	1.17	0.98	0.98	0.35	0.63	0.56	0.89	0.00	0.00	0.94	0.01	0.47
Avail Cap(c_a), veh/h	386	966	1014	54	2040	633	177	0	0	438	490	616
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	0.77	0.77	0.77	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	25.7	25.8	38.4	1.7	1.7	68.1	0.0	0.0	64.9	41.0	34.4
Incr Delay (d2), s/veh	87.9	15.7	15.8	13.1	1.1	2.7	39.1	0.0	0.0	28.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	34.3	36.3	0.9	0.9	1.0	8.1	0.0	0.0	9.5	0.1	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.4	41.4	41.6	51.5	2.9	4.4	107.2	0.0	0.0	93.1	41.0	34.9
LnGrp LOS	F	D	D	D	A	A	F	A	A	F	D	C
Approach Vol, veh/h		2396			1658			158			708	
Approach Delay, s/veh		62.5			3.8			107.2			68.8	
Approach LOS		E			A			F			E	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	25.0	79.0		46.0		104.0	25.0	21.0				
Change Period (Y+Rc), s	6.0	7.1		6.7		7.1	6.0	6.7				
Max Green Setting (Gmax), s	19.0	71.9		39.3		96.9	19.0	14.3				
Max Q Clear Time (g_c+I1), s	21.0	73.9		22.7		94.7	19.7	16.3				
Green Ext Time (p_c), s	0.0	0.0		0.9		2.1	0.0	0.0				

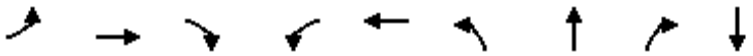
Intersection Summary			
HCM 6th Ctrl Delay		45.1	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	30	2180	479	334	1372	282	62	347	15	60
Future Volume (vph)	30	2180	479	334	1372	282	62	347	15	60
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	2		8			4
Permitted Phases	6		6			8		8	4	
Detector Phase	1	6	6	5	2	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.7	18.7	12.0	18.7	15.4	15.4	15.4	15.4	15.4
Total Split (s)	12.0	101.0	101.0	19.0	108.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	8.0%	67.3%	67.3%	12.7%	72.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.7	4.7	3.5	4.7	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.1	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.6	6.7	6.7	6.0	6.7	7.4	7.4	7.4		7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	101.3	94.0	94.0	13.0	105.8	22.9	22.9	22.9		22.9
Actuated g/C Ratio	0.68	0.63	0.63	0.09	0.71	0.15	0.15	0.15		0.15
v/c Ratio	0.11	0.86	0.51	1.14	0.47	1.66	0.22	0.64		0.41
Control Delay	5.8	26.8	3.9	150.0	7.8	358.9	58.3	39.2		55.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	5.8	26.8	3.9	150.0	7.8	358.9	58.3	39.2		55.7
LOS	A	C	A	F	A	F	E	D		E
Approach Delay		22.5			35.3		171.5			55.7
Approach LOS		C			D		F			E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 68 (45%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.66	
Intersection Signal Delay: 47.2	Intersection LOS: D
Intersection Capacity Utilization 90.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Flippen Rd/Shields Rd & SR 42-138/US 23/N Henry Blvd





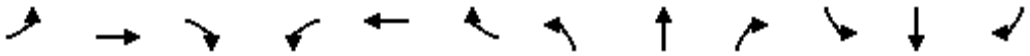
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	31	2224	489	341	1421	288	63	354	110
v/c Ratio	0.11	0.86	0.51	1.14	0.47	1.66	0.22	0.64	0.41
Control Delay	5.8	26.8	3.9	150.0	7.8	358.9	58.3	39.2	55.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	26.8	3.9	150.0	7.8	358.9	58.3	39.2	55.7
Queue Length 50th (ft)	7	606	23	~203	145	~410	55	106	87
Queue Length 95th (ft)	15	681	79	m#308	m153	#603	102	168	153
Internal Link Dist (ft)		4582			3939		720		305
Turn Bay Length (ft)	135			205				25	
Base Capacity (vph)	277	2608	970	300	2994	173	284	555	271
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.85	0.50	1.14	0.47	1.66	0.22	0.64	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2180	479	334	1372	21	282	62	347	15	60	33
Future Volume (veh/h)	30	2180	479	334	1372	21	282	62	347	15	60	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1530	1530	1885	1574	1574	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	2224	489	341	1400	21	288	63	354	15	61	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	25	25	1	22	22	2	2	2	2	2	2
Cap, veh/h	304	2625	815	302	3005	45	220	282	420	46	155	78
Arrive On Green	0.03	0.63	0.63	0.09	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	4176	1296	3483	4361	65	1301	1870	2790	121	1029	515
Grp Volume(v), veh/h	31	2224	489	341	920	501	288	63	354	110	0	0
Grp Sat Flow(s),veh/h/ln	1781	1392	1296	1742	1432	1562	1301	1870	1395	1665	0	0
Q Serve(g_s), s	0.9	63.5	33.7	13.0	22.1	22.1	14.2	4.4	18.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	63.5	33.7	13.0	22.1	22.1	22.6	4.4	18.5	8.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	0.14		0.31
Lane Grp Cap(c), veh/h	304	2625	815	302	1974	1076	220	282	420	278	0	0
V/C Ratio(X)	0.10	0.85	0.60	1.13	0.47	0.47	1.31	0.22	0.84	0.40	0.00	0.00
Avail Cap(c_a), veh/h	329	2625	815	302	1974	1076	220	282	420	278	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.6	22.1	16.6	68.5	10.7	10.7	66.9	56.0	62.0	57.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	3.6	3.3	85.6	0.6	1.1	167.3	0.8	15.6	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	19.7	10.1	9.4	6.8	7.6	18.7	2.2	7.4	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	25.7	19.9	154.1	11.3	11.8	234.3	56.8	77.5	59.6	0.0	0.0
LnGrp LOS	A	C	B	F	B	B	F	E	E	E	A	A
Approach Vol, veh/h		2744			1762			705			110	
Approach Delay, s/veh		24.5			39.1			139.7			59.6	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	110.0		30.0	19.0	101.0		30.0				
Change Period (Y+Rc), s	5.6	6.7		7.4	6.0	6.7		7.4				
Max Green Setting (Gmax), s	6.4	101.3		22.6	13.0	94.3		22.6				
Max Q Clear Time (g_c+I1), s	2.9	24.1		10.4	15.0	65.5		24.6				
Green Ext Time (p_c), s	0.0	34.3		0.7	0.0	27.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		45.3	
HCM 6th LOS		D	

Intersection	
Int Delay, s/veh	31.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	4	346	25	5	35	318	1298	37	38	2271	130
Future Vol, veh/h	80	4	346	25	5	35	318	1298	37	38	2271	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	325	-	280	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	25	2	2	25	2
Mvmt Flow	83	4	360	26	5	36	331	1352	39	40	2366	135

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3787	4499	1183	3279	4595	676	2501	0	0	1391	0	0
Stage 1	2446	2446	-	2014	2014	-	-	-	-	-	-	-
Stage 2	1341	2053	-	1265	2581	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 1	~ 1	~ 182	~ 4	~ 1	396	~ 179	-	-	488	-	-
Stage 1	~ 32	61	-	60	101	-	-	-	-	-	-	-
Stage 2	161	97	-	179	52	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 182	-	0	396	~ 179	-	-	488	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	~ 32	56	-	60	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	48	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			86.1	0.2
HCM LOS	-	-		

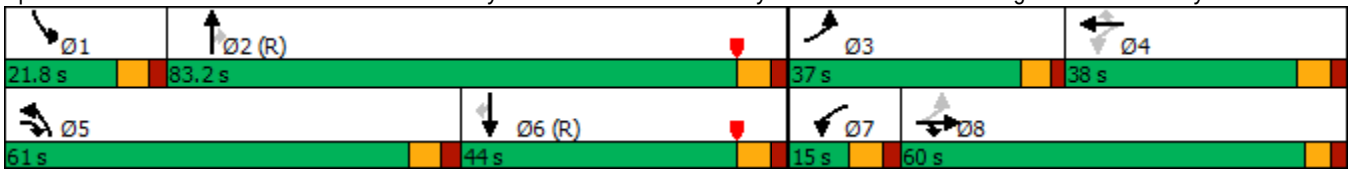
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	~ 179	-	-	-	182	-	396	488	-	-
HCM Lane V/C Ratio	1.851	-	-	-	1.98	-	0.092	0.081	-	-
HCM Control Delay (s)	$ 447.5	-	-	-	$ 502.8	-	15	13	-	-
HCM Lane LOS	F	-	-	-	F	-	C	B	-	-
HCM 95th %tile Q(veh)	24.2	-	-	-	27.3	-	0.3	0.3	-	-

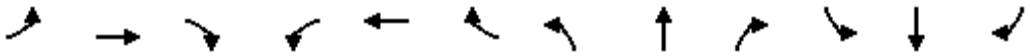
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	423	173	1500	125	172	126	871	504	71	70	829	210
Future Volume (vph)	423	173	1500	125	172	126	871	504	71	70	829	210
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8 5	7	4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Detector Phase	3	8	8 5	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0		8.0	8.0	8.0	6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	11.0	14.0		15.0	15.0	15.0	12.8	18.9	18.9	12.9	18.9	18.9
Total Split (s)	37.0	60.0		15.0	38.0	38.0	61.0	83.2	83.2	21.8	44.0	44.0
Total Split (%)	20.6%	33.3%		8.3%	21.1%	21.1%	33.9%	46.2%	46.2%	12.1%	24.4%	24.4%
Yellow Time (s)	4.0	3.5		4.5	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		7.0	7.0	7.0	6.8	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	69.0	54.0	115.0	39.0	31.0	31.0	54.2	77.6	77.6	13.6	37.1	37.1
Actuated g/C Ratio	0.38	0.30	0.64	0.22	0.17	0.17	0.30	0.43	0.43	0.08	0.21	0.21
v/c Ratio	0.97	0.17	1.01	0.46	0.56	0.31	1.01	0.42	0.10	0.54	0.99	0.49
Control Delay	43.6	35.6	53.1	50.6	75.8	3.0	92.8	37.2	0.3	95.3	99.1	10.5
Queue Delay	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	43.6	35.6	59.1	50.6	75.8	3.0	92.8	37.2	0.3	95.3	99.1	10.8
LOS	D	D	E	D	E	A	F	D	A	F	F	B
Approach Delay		54.0			46.7			68.9			82.2	
Approach LOS		D			D			E			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 114 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 63.8	Intersection LOS: E
Intersection Capacity Utilization 95.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: SR 42-138/US 23/N Henry Blvd/SR 42/US 23/N Henry Blvd & SR 138/Stockbridge Rd/Walmart dwy





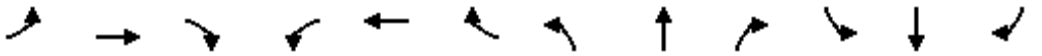
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	441	180	1563	130	179	131	907	525	74	73	864	219
v/c Ratio	0.97	0.17	1.01	0.46	0.56	0.31	1.01	0.42	0.10	0.54	0.99	0.49
Control Delay	43.6	35.6	53.1	50.6	75.8	3.0	92.8	37.2	0.3	95.3	99.1	10.5
Queue Delay	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	43.6	35.6	59.1	50.6	75.8	3.0	92.8	37.2	0.3	95.3	99.1	10.8
Queue Length 50th (ft)	407	77	~986	103	197	0	~563	229	0	84	378	0
Queue Length 95th (ft)	m404	m77	m#971	160	285	9	#712	285	0	145	#481	82
Internal Link Dist (ft)		895			523			751			1095	
Turn Bay Length (ft)	650		650			100	340		290	580		580
Base Capacity (vph)	455	1061	1551	283	320	425	901	1244	764	146	869	444
Starvation Cap Reductn	0	0	30	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	33
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.17	1.03	0.46	0.56	0.31	1.01	0.42	0.10	0.50	0.99	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	423	173	1500	125	172	126	871	504	71	70	829	210
Future Volume (veh/h)	423	173	1500	125	172	126	871	504	71	70	829	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1648	1870	1870	1870	1648	1530	1870	1870	1559	1559
Adj Flow Rate, veh/h	441	180	1562	130	179	131	907	525	74	73	864	219
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	17	2	2	2	17	25	2	2	23	23
Cap, veh/h	444	1066	1478	168	333	282	917	1627	888	91	1322	410
Arrive On Green	0.06	0.10	0.10	0.04	0.18	0.18	0.30	0.56	0.56	0.05	0.31	0.31
Sat Flow, veh/h	1781	3554	2458	1781	1870	1585	3045	2906	1585	1781	4256	1321
Grp Volume(v), veh/h	441	180	1562	130	179	131	907	525	74	73	864	219
Grp Sat Flow(s),veh/h/ln	1781	1777	1229	1781	1870	1585	1522	1453	1585	1781	1419	1321
Q Serve(g_s), s	31.0	8.4	54.0	8.0	15.7	13.3	53.4	17.5	3.9	7.3	31.6	24.7
Cycle Q Clear(g_c), s	31.0	8.4	54.0	8.0	15.7	13.3	53.4	17.5	3.9	7.3	31.6	24.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	444	1066	1478	168	333	282	917	1627	888	91	1322	410
V/C Ratio(X)	0.99	0.17	1.06	0.77	0.54	0.46	0.99	0.32	0.08	0.80	0.65	0.53
Avail Cap(c_a), veh/h	444	1066	1478	168	333	282	917	1627	888	147	1322	410
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	60.5	38.4	62.0	67.3	66.3	62.6	21.3	18.3	84.5	53.7	51.3
Incr Delay (d2), s/veh	11.4	0.0	27.6	20.1	2.0	1.4	27.0	0.5	0.2	34.5	2.5	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	3.9	28.2	2.9	7.8	5.5	23.7	6.0	1.5	4.2	11.5	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.8	60.5	66.0	82.1	69.3	67.8	89.6	21.8	18.5	119.0	56.2	56.2
LnGrp LOS	E	E	F	F	E	E	F	C	B	F	E	E
Approach Vol, veh/h		2183			440			1506			1156	
Approach Delay, s/veh		66.5			72.6			62.5			60.2	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	107.8	37.0	39.0	61.0	62.9	15.0	61.0
Change Period (Y+Rc), s	6.9	6.9	6.0	7.0	6.8	6.9	7.0	* 7
Max Green Setting (Gmax), s	14.9	76.3	31.0	31.0	54.2	37.1	8.0	* 54
Max Q Clear Time (g_c+I1), s	9.3	19.5	33.0	17.7	55.4	33.6	10.0	56.0
Green Ext Time (p_c), s	0.1	8.4	0.0	1.5	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	64.5
HCM 6th LOS	E

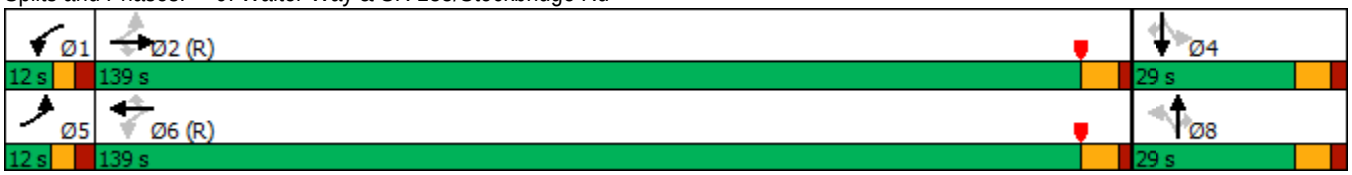
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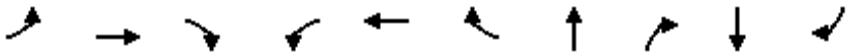
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	2157	85	181	1276	25	107	5	249	10	7	24
Future Volume (vph)	23	2157	85	181	1276	25	107	5	249	10	7	24
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	12.0	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1
Total Split (s)	12.0	139.0	139.0	12.0	139.0	139.0	29.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	6.7%	77.2%	77.2%	6.7%	77.2%	77.2%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Yellow Time (s)	3.3	4.9	4.9	3.2	4.9	4.9	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.8	6.8	5.7	6.8	6.8		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	139.3	132.2	132.2	141.9	137.0	137.0		21.9	21.9		21.9	21.9
Actuated g/C Ratio	0.77	0.73	0.73	0.79	0.76	0.76		0.12	0.12		0.12	0.12
v/c Ratio	0.08	1.00	0.09	1.84	0.57	0.02		0.72	1.06		0.10	0.10
Control Delay	2.0	20.9	0.3	438.3	20.1	0.2		100.5	126.4		71.9	0.8
Queue Delay	0.0	36.8	0.0	0.0	1.2	0.0		0.0	17.9		0.0	0.0
Total Delay	2.0	57.7	0.3	438.3	21.3	0.2		100.5	144.3		71.9	0.8
LOS	A	E	A	F	C	A		F	F		E	A
Approach Delay		55.0			72.0			130.7			30.6	
Approach LOS		D			E			F			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 171 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay: 67.4	Intersection LOS: E
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Walter Way & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	2271	89	191	1343	26	118	262	18	25
v/c Ratio	0.08	1.00	0.09	1.84	0.57	0.02	0.72	1.06	0.10	0.10
Control Delay	2.0	20.9	0.3	438.3	20.1	0.2	100.5	126.4	71.9	0.8
Queue Delay	0.0	36.8	0.0	0.0	1.2	0.0	0.0	17.9	0.0	0.0
Total Delay	2.0	57.7	0.3	438.3	21.3	0.2	100.5	144.3	71.9	0.8
Queue Length 50th (ft)	2	~1250	1	~288	781	0	137	~267	19	0
Queue Length 95th (ft)	m2	m113	m0	m#360	m817	m0	#235	#467	48	0
Internal Link Dist (ft)		492			895		2216		57	
Turn Bay Length (ft)	85			95		170		200		
Base Capacity (vph)	299	2265	1029	104	2348	1219	163	248	182	243
Starvation Cap Reductn	0	220	0	0	711	0	0	0	0	0
Spillback Cap Reductn	0	59	0	0	0	0	0	45	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.11	0.09	1.84	0.82	0.02	0.72	1.29	0.10	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	2157	85	181	1276	25	107	5	249	10	7	24
Future Volume (veh/h)	23	2157	85	181	1276	25	107	5	249	10	7	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1648	1648	1870	1648	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	2271	89	191	1343	26	113	5	262	11	7	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	17	17	2	17	2	2	2	2	2	2	2
Cap, veh/h	373	2300	1026	213	2335	1182	39	0	193	32	13	193
Arrive On Green	0.05	1.00	1.00	0.05	0.99	0.99	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3131	1397	1781	3131	1585	0	0	1585	0	109	1585
Grp Volume(v), veh/h	24	2271	89	191	1343	26	118	0	262	18	0	25
Grp Sat Flow(s),veh/h/ln	1781	1566	1397	1781	1566	1585	0	0	1585	109	0	1585
Q Serve(g_s), s	0.6	0.0	0.0	5.1	1.5	0.0	0.0	0.0	21.9	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	5.1	1.5	0.0	21.9	0.0	21.9	21.9	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	0.96		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	373	2300	1026	213	2335	1182	39	0	193	45	0	193
V/C Ratio(X)	0.06	0.99	0.09	0.90	0.58	0.02	3.01	0.00	1.36	0.40	0.00	0.13
Avail Cap(c_a), veh/h	393	2300	1026	213	2335	1182	39	0	193	45	0	193
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.39	0.39	0.39	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	14.9	0.2	0.2	90.0	0.0	79.1	74.4	0.0	70.5
Incr Delay (d2), s/veh	0.0	3.4	0.0	17.3	0.4	0.0	970.5	0.0	191.2	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.1	0.0	4.6	0.3	0.0	12.4	0.0	19.2	0.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	3.4	0.0	32.2	0.6	0.2	1060.5	0.0	270.3	79.9	0.0	70.8
LnGrp LOS	A	A	A	C	A	A	F	A	F	E	A	E
Approach Vol, veh/h		2384			1560			380			43	
Approach Delay, s/veh		3.3			4.5			515.6			74.6	
Approach LOS		A			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	139.0		29.0	10.0	141.0		29.0				
Change Period (Y+Rc), s	* 5.7	* 6.8		7.1	* 5.8	* 6.8		7.1				
Max Green Setting (Gmax), s	* 6.3	* 1.3E2		21.9	* 6.2	* 1.3E2		21.9				
Max Q Clear Time (g_c+I1), s	7.1	2.0		23.9	2.6	3.5		23.9				
Green Ext Time (p_c), s	0.0	106.9		0.0	0.0	37.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		49.0	
HCM 6th LOS		D	

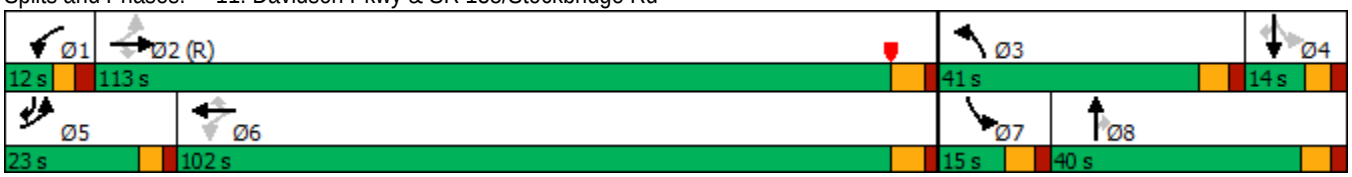
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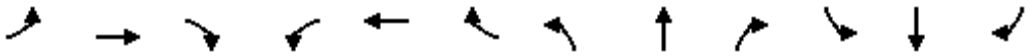
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	2062	1221	77	1323	61	1447	28	150	70	27	188
Future Volume (vph)	165	2062	1221	77	1323	61	1447	28	150	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	6.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.3	11.0	14.0	12.0
Total Split (s)	23.0	113.0	113.0	12.0	102.0	102.0	41.0	40.0	40.0	15.0	14.0	23.0
Total Split (%)	12.8%	62.8%	62.8%	6.7%	56.7%	56.7%	22.8%	22.2%	22.2%	8.3%	7.8%	12.8%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.8	4.0	3.5	3.2
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.0	2.5	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.3	6.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	122.1	109.8	109.8	111.8	104.5	104.5	34.7	30.8	30.8	15.2	8.0	23.6
Actuated g/C Ratio	0.68	0.61	0.61	0.62	0.58	0.58	0.19	0.17	0.17	0.08	0.04	0.13
v/c Ratio	0.64	0.58	0.98	0.68	0.39	0.07	0.87	0.09	0.42	0.54	0.34	0.68
Control Delay	15.9	26.5	27.9	60.4	14.8	0.6	76.7	61.4	20.9	70.7	95.0	49.6
Queue Delay	0.0	28.9	40.0	0.0	0.0	0.0	48.3	0.0	0.2	0.0	0.0	3.1
Total Delay	15.9	55.3	67.9	60.4	14.8	0.6	125.0	61.4	21.2	70.7	95.0	52.7
LOS	B	E	E	E	B	A	F	E	C	E	F	D
Approach Delay		57.9			16.6			114.3			61.1	
Approach LOS		E			B			F			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 62.6	Intersection LOS: E
Intersection Capacity Utilization 102.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	172	2148	1272	80	1378	64	1507	29	156	73	28	196
v/c Ratio	0.64	0.58	0.98	0.68	0.39	0.07	0.87	0.09	0.42	0.54	0.34	0.68
Control Delay	15.9	26.5	27.9	60.4	14.8	0.6	76.7	61.4	20.9	70.7	95.0	49.6
Queue Delay	0.0	28.9	40.0	0.0	0.0	0.0	48.3	0.0	0.2	0.0	0.0	3.1
Total Delay	15.9	55.3	67.9	60.4	14.8	0.6	125.0	61.4	21.2	70.7	95.0	52.7
Queue Length 50th (ft)	79	454	177	30	231	0	342	29	36	66	33	117
Queue Length 95th (ft)	m84	m478	m#801	m#117	274	m5	371	62	111	114	72	205
Internal Link Dist (ft)		432			495			439			264	
Turn Bay Length (ft)	75		165	125								
Base Capacity (vph)	318	3726	1297	118	3543	984	1754	348	393	137	82	334
Starvation Cap Reductn	0	1415	201	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	1690	0	0	0	0	719	0	33	0	0	67
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.06	1.16	0.68	0.39	0.07	1.46	0.08	0.43	0.53	0.34	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	2062	1221	77	1323	61	1447	28	150	70	27	188
Future Volume (veh/h)	165	2062	1221	77	1323	61	1447	28	150	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2148	0	80	1378	64	1507	29	156	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	275	3697		160	3604	931	1692	341	289	180	83	151
Arrive On Green	0.03	0.40	0.00	0.01	0.19	0.19	0.19	0.18	0.18	0.05	0.04	0.04
Sat Flow, veh/h	1781	6134	1585	1781	6134	1585	9085	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	172	2148	0	80	1378	64	1507	29	156	73	28	196
Grp Sat Flow(s),veh/h/ln	1781	1227	1585	1781	1227	1585	1514	1870	1585	1781	1870	1585
Q Serve(g_s), s	6.8	49.1	0.0	3.2	35.2	5.9	29.1	2.3	16.1	7.0	2.6	8.0
Cycle Q Clear(g_c), s	6.8	49.1	0.0	3.2	35.2	5.9	29.1	2.3	16.1	7.0	2.6	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	3697		160	3604	931	1692	341	289	180	83	151
V/C Ratio(X)	0.62	0.58		0.50	0.38	0.07	0.89	0.09	0.54	0.41	0.34	1.30
Avail Cap(c_a), veh/h	363	3697		166	3604	931	1766	350	297	182	83	151
HCM Platoon Ratio	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.15	0.15	0.00	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	36.0	0.0	24.8	44.1	32.3	71.4	61.1	66.8	77.2	83.4	81.4
Incr Delay (d2), s/veh	0.4	0.1	0.0	1.8	0.1	0.0	5.9	0.1	1.9	1.5	2.4	175.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	15.4	0.0	1.4	11.7	2.4	11.9	1.1	6.8	3.3	1.3	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	36.1	0.0	26.6	44.2	32.4	77.4	61.3	68.6	78.7	85.8	256.5
LnGrp LOS	C	D		C	D	C	E	E	E	E	F	F
Approach Vol, veh/h		2320	A		1522			1692			297	
Approach Delay, s/veh		34.9			42.8			76.3			196.7	
Approach LOS		C			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	114.8	39.5	14.3	14.1	112.1	14.7	39.1
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3	6.0	* 6.3
Max Green Setting (Gmax), s	6.5	* 1.1E2	35.0	* 8	18.0	* 96	9.0	* 34
Max Q Clear Time (g_c+I1), s	5.2	51.1	31.1	10.0	8.8	37.2	9.0	18.1
Green Ext Time (p_c), s	0.0	46.5	2.4	0.0	0.3	29.6	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	57.2
HCM 6th LOS	E

Notes

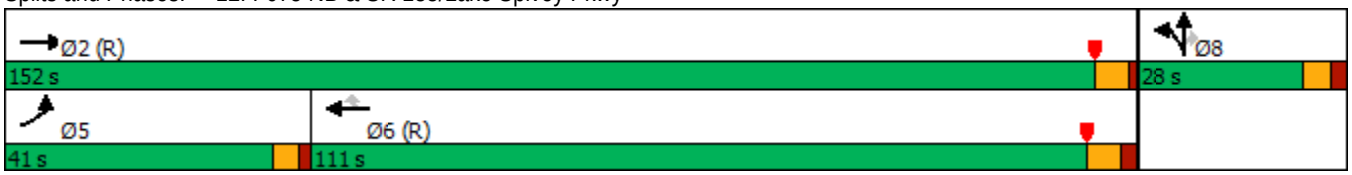
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	491	3126	2436	603	0	361
Future Volume (vph)	491	3126	2436	603	0	361
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	31.4	146.0	108.6	108.6	21.9	21.9
Actuated g/C Ratio	0.17	0.81	0.60	0.60	0.12	0.12
v/c Ratio	0.85	0.98	1.02	0.57	0.32	0.97
Control Delay	94.5	14.8	43.6	4.9	76.8	104.5
Queue Delay	0.0	3.7	31.6	2.8	0.0	0.5
Total Delay	94.5	18.5	75.2	7.7	76.8	105.0
LOS	F	B	E	A	E	F
Approach Delay		28.8	61.8		100.6	
Approach LOS		C	E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





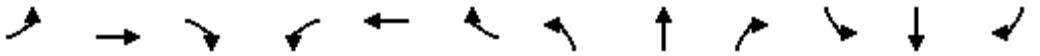
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	511	3256	2538	628	69	376
v/c Ratio	0.85	0.98	1.02	0.57	0.32	0.97
Control Delay	94.5	14.8	43.6	4.9	76.8	104.5
Queue Delay	0.0	3.7	31.6	2.8	0.0	0.5
Total Delay	94.5	18.5	75.2	7.7	76.8	105.0
Queue Length 50th (ft)	329	341	~1170	364	76	221
Queue Length 95th (ft)	m366	345	#1263	426	132	#346
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	686	3339	2483	1094	215	387
Starvation Cap Reductn	0	0	426	343	0	0
Spillback Cap Reductn	0	77	0	0	0	1
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.00	1.23	0.84	0.32	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	491	3126	0	0	2436	603	66	0	361	0	0	0
Future Volume (veh/h)	491	3126	0	0	2436	603	66	0	361	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	511	3256	0	0	2538	628	69	0	376			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	555	3331	0	0	2552	978	217	0	339			
Arrive On Green	0.32	1.00	0.00	0.00	0.62	0.62	0.12	0.00	0.12			
Sat Flow, veh/h	3456	4271	0	0	4271	1585	1781	0	2790			
Grp Volume(v), veh/h	511	3256	0	0	2538	628	69	0	376			
Grp Sat Flow(s),veh/h/ln	1728	1378	0	0	1378	1585	1781	0	1395			
Q Serve(g_s), s	25.7	0.0	0.0	0.0	109.5	45.2	6.4	0.0	21.9			
Cycle Q Clear(g_c), s	25.7	0.0	0.0	0.0	109.5	45.2	6.4	0.0	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	555	3331	0	0	2552	978	217	0	339			
V/C Ratio(X)	0.92	0.98	0.00	0.00	0.99	0.64	0.32	0.00	1.11			
Avail Cap(c_a), veh/h	691	3354	0	0	2552	978	217	0	339			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	0.72	0.72	1.00	0.00	1.00			
Uniform Delay (d), s/veh	60.0	0.0	0.0	0.0	34.1	21.8	72.2	0.0	79.1			
Incr Delay (d2), s/veh	6.5	5.3	0.0	0.0	13.9	2.3	0.8	0.0	81.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.2	1.6	0.0	0.0	37.4	16.8	2.9	0.0	11.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	5.3	0.0	0.0	48.0	24.2	73.1	0.0	160.2			
LnGrp LOS	E	A	A	A	D	C	E	A	F			
Approach Vol, veh/h		3767			3166			445				
Approach Delay, s/veh		13.6			43.3			146.7				
Approach LOS		B			D			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		152.0			33.9	118.1		28.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			27.7	111.5		23.9				
Green Ext Time (p_c), s		140.3			1.2	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

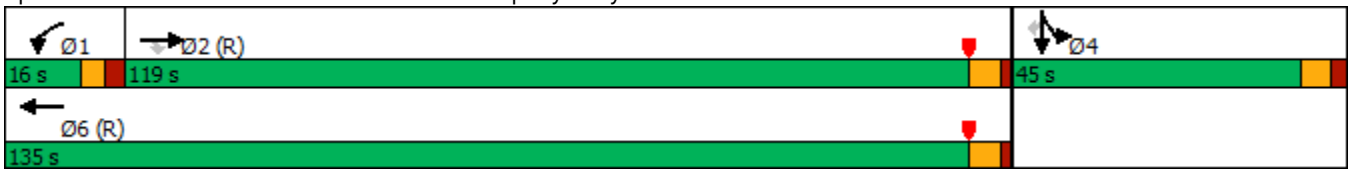
Notes

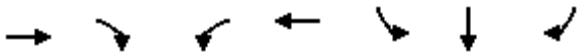
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2848	80	354	2147	798	0	795
Future Volume (vph)	2848	80	354	2147	798	0	795
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	119.0	119.0	16.0	135.0	45.0	45.0	45.0
Total Split (%)	66.1%	66.1%	8.9%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	113.1	113.1	10.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.63	0.63	0.06	0.72	0.21	0.21	0.21
v/c Ratio	0.90	0.10	1.90	0.75	0.80	0.79	1.38
Control Delay	21.2	6.0	446.6	10.0	77.1	84.1	228.8
Queue Delay	0.9	0.0	0.0	3.5	0.0	0.0	0.0
Total Delay	22.2	6.0	446.6	13.5	77.1	84.1	228.8
LOS	C	A	F	B	E	F	F
Approach Delay	21.7			74.8		154.0	
Approach LOS	C			E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.90	
Intersection Signal Delay: 70.7	Intersection LOS: E
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





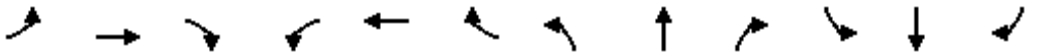
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2936	82	365	2213	551	272	820
v/c Ratio	0.90	0.10	1.90	0.75	0.80	0.79	1.38
Control Delay	21.2	6.0	446.6	10.0	77.1	84.1	228.8
Queue Delay	0.9	0.0	0.0	3.5	0.0	0.0	0.0
Total Delay	22.2	6.0	446.6	13.5	77.1	84.1	228.8
Queue Length 50th (ft)	280	3	~346	231	343	338	~725
Queue Length 95th (ft)	436	m22	m#340	m234	423	#489	#875
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	3259	826	192	2952	688	344	596
Starvation Cap Reductn	129	0	0	180	0	0	0
Spillback Cap Reductn	45	0	0	634	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.10	1.90	0.95	0.80	0.79	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2848	80	354	2147	0	0	0	0	798	0	795
Future Volume (veh/h)	0	2848	80	354	2147	0	0	0	0	798	0	795
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2936	82	365	2213	0				823	0	820
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	3274	807	194	2966	0				1143	0	678
Arrive On Green	0.00	1.00	1.00	0.11	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	5423	1284	3456	4271	0				5344	0	3170
Grp Volume(v), veh/h	0	2936	82	365	2213	0				823	0	820
Grp Sat Flow(s),veh/h/ln	0	1303	1284	1728	1378	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.1	0.0	0.0				25.8	0.0	38.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.1	0.0	0.0				25.8	0.0	38.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3274	807	194	2966	0				1143	0	678
V/C Ratio(X)	0.00	0.90	0.10	1.88	0.75	0.00				0.72	0.00	1.21
Avail Cap(c_a), veh/h	0	3274	807	194	2966	0				1143	0	678
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.46	0.46	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	79.9	0.0	0.0				65.7	0.0	70.8
Incr Delay (d2), s/veh	0.0	2.1	0.1	398.8	0.2	0.0				2.3	0.0	107.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.0	14.9	0.0	0.0				11.8	0.0	25.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.1	0.1	478.7	0.2	0.0				68.1	0.0	178.4
LnGrp LOS	A	A	A	F	A	A				E	A	F
Approach Vol, veh/h		3018			2578						1643	
Approach Delay, s/veh		2.0			67.9						123.1	
Approach LOS		A			E						F	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.0	119.0		45.0		135.0						
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9						
Max Green Setting (Gmax), s	10.1	113.1		38.5		129.1						
Max Q Clear Time (g_c+I1), s	12.1	2.0		40.5		2.0						
Green Ext Time (p_c), s	0.0	105.9		0.0		91.3						

Intersection Summary												
HCM 6th Ctrl Delay			53.0									
HCM 6th LOS			D									

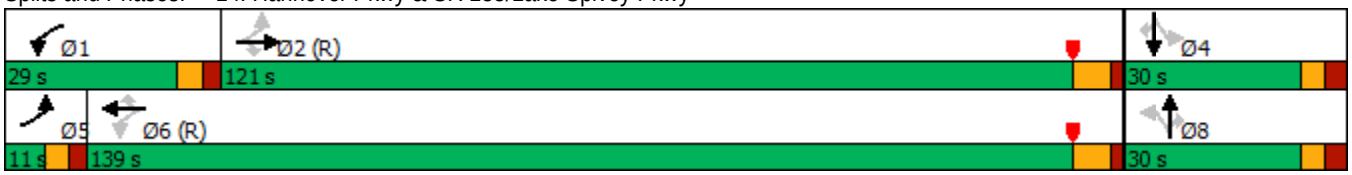
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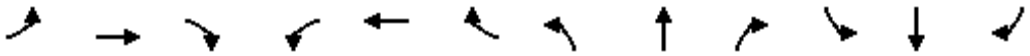
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	2528	47	197	2527	95	65	23	197	85	17	46
Future Volume (vph)	45	2528	47	197	2527	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.9	123.3	123.3	150.0	140.2	140.2	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.50	0.84	0.04	0.86	1.06	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	40.6	13.4	0.0	68.2	49.6	3.7	88.6	73.4	37.3	100.2	72.5	1.9
Queue Delay	0.0	0.1	0.0	0.0	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	13.5	0.0	68.2	67.5	3.7	88.6	73.4	37.3	100.2	72.5	1.9
LOS	D	B	A	E	E	A	F	E	D	F	E	A
Approach Delay		13.7			65.4			52.0			66.5	
Approach LOS		B			E			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 41.7	Intersection LOS: D
Intersection Capacity Utilization 100.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





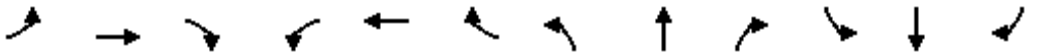
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2633	49	205	2632	99	68	24	205	89	18	48
v/c Ratio	0.50	0.84	0.04	0.86	1.06	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	40.6	13.4	0.0	68.2	49.6	3.7	88.6	73.4	37.3	100.2	72.5	1.9
Queue Delay	0.0	0.1	0.0	0.0	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	13.5	0.0	68.2	67.5	3.7	88.6	73.4	37.3	100.2	72.5	1.9
Queue Length 50th (ft)	10	162	0	187	~1805	10	78	26	65	103	20	0
Queue Length 95th (ft)	m25	767	m0	m243	m#1693	m16	132	58	160	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	96	3143	1112	270	2488	1245	182	244	335	181	244	289
Starvation Cap Reductn	0	0	0	0	164	0	0	0	0	0	0	0
Spillback Cap Reductn	0	30	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.85	0.04	0.76	1.13	0.08	0.37	0.10	0.61	0.49	0.07	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	2528	47	197	2527	95	65	23	197	85	17	46
Future Volume (veh/h)	45	2528	47	197	2527	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2633	49	205	2632	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	149	3276	1114	222	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.12	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	4661	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2633	49	205	2632	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1554	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.4	0.0	0.0	8.4	0.0	0.0	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.4	0.0	0.0	8.4	0.0	0.0	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	3276	1114	222	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.32	0.80	0.04	0.92	1.09	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	167	3276	1114	344	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.44	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.0	0.0	0.0	29.0	0.0	0.0	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.2	1.0	0.0	5.8	43.2	0.0	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	0.0	8.3	14.5	0.0	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.2	1.0	0.0	34.8	43.2	0.0	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	A	A	C	F	A	E	E	F	E	E	E
Approach Vol, veh/h		2729			2936			297			155	
Approach Delay, s/veh		1.1			41.1			116.6			75.1	
Approach LOS		A			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.6	133.4		30.0	9.2	140.8		30.0				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24				
Max Q Clear Time (g_c+I1), s	10.4	2.0		17.3	3.4	2.0		25.2				
Green Ext Time (p_c), s	0.2	99.9		0.4	0.0	120.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

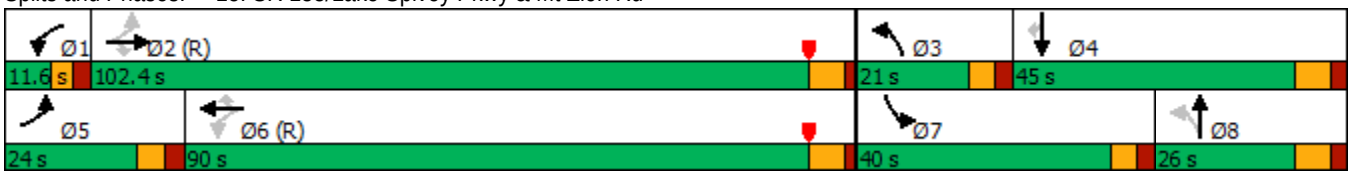
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	239	2060	168	47	2091	434	148	87	442	79	237
Future Volume (vph)	239	2060	168	47	2091	434	148	87	442	79	237
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8				4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	113.1	103.4	103.4	91.0	83.6	83.6	33.7	18.1	29.4	33.0	33.0
Actuated g/C Ratio	0.63	0.57	0.57	0.51	0.46	0.46	0.19	0.10	0.16	0.18	0.18
v/c Ratio	0.95	0.83	0.19	0.48	1.04	0.54	0.56	0.73	0.84	0.25	0.59
Control Delay	72.7	29.0	6.8	25.3	64.7	16.1	57.4	94.1	86.9	63.3	28.2
Queue Delay	0.0	0.4	0.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	29.4	6.8	25.3	85.8	16.1	57.4	94.1	86.9	63.3	28.3
LOS	E	C	A	C	F	B	E	F	F	E	C
Approach Delay		32.1			73.0			74.4		66.1	
Approach LOS		C			E			E		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 55.6	Intersection LOS: E
Intersection Capacity Utilization 94.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





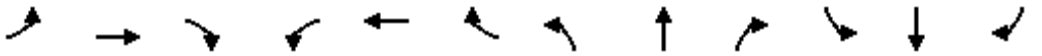
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	254	2191	179	50	2224	462	157	136	470	84	252
v/c Ratio	0.95	0.83	0.19	0.48	1.04	0.54	0.56	0.73	0.84	0.25	0.59
Control Delay	72.7	29.0	6.8	25.3	64.7	16.1	57.4	94.1	86.9	63.3	28.2
Queue Delay	0.0	0.4	0.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	29.4	6.8	25.3	85.8	16.1	57.4	94.1	86.9	63.3	28.3
Queue Length 50th (ft)	~271	739	22	25	~1033	136	140	145	281	85	93
Queue Length 95th (ft)	m#297	m646	m24	m25	m845	m136	203	#239	339	139	192
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	268	2636	965	105	2131	860	286	201	648	392	462
Starvation Cap Reductn	0	119	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	100	0	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.87	0.19	0.48	1.10	0.54	0.55	0.68	0.73	0.21	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	2060	168	47	2091	434	148	87	40	442	79	237
Future Volume (veh/h)	239	2060	168	47	2091	434	148	87	40	442	79	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	254	2191	179	50	2224	462	157	93	43	470	84	252
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	268	2665	906	169	2332	793	301	131	60	521	328	278
Arrive On Green	0.20	1.00	1.00	0.06	1.00	1.00	0.08	0.11	0.11	0.15	0.18	0.18
Sat Flow, veh/h	1781	4661	1585	1781	4661	1585	1781	1210	560	3456	1870	1585
Grp Volume(v), veh/h	254	2191	179	50	2224	462	157	0	136	470	84	252
Grp Sat Flow(s),veh/h/ln	1781	1554	1585	1781	1554	1585	1781	0	1770	1728	1870	1585
Q Serve(g_s), s	15.5	0.0	0.0	2.4	0.0	0.0	14.1	0.0	13.4	24.1	7.0	28.1
Cycle Q Clear(g_c), s	15.5	0.0	0.0	2.4	0.0	0.0	14.1	0.0	13.4	24.1	7.0	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	268	2665	906	169	2332	793	301	0	191	521	328	278
V/C Ratio(X)	0.95	0.82	0.20	0.30	0.95	0.58	0.52	0.00	0.71	0.90	0.26	0.91
Avail Cap(c_a), veh/h	270	2665	906	175	2332	793	301	0	191	653	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	0.0	19.7	0.0	0.0	64.6	0.0	77.6	75.1	64.1	72.8
Incr Delay (d2), s/veh	7.5	0.3	0.0	0.1	1.3	0.3	1.6	0.0	14.5	13.6	0.9	27.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.1	0.0	1.0	0.3	0.1	6.6	0.0	6.9	11.6	3.4	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	0.3	0.0	19.8	1.3	0.3	66.2	0.0	92.1	88.7	64.9	100.5
LnGrp LOS	D	A	A	B	A	A	E	A	F	F	E	F
Approach Vol, veh/h		2624			2736			293			806	
Approach Delay, s/veh		4.1			1.5			78.2			89.9	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	109.3	21.0	38.7	23.9	96.5	33.2	26.5
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.4	2.0	16.1	30.1	17.5	2.0	26.1	15.4
Green Ext Time (p_c), s	0.0	75.1	0.0	1.5	0.0	71.7	1.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

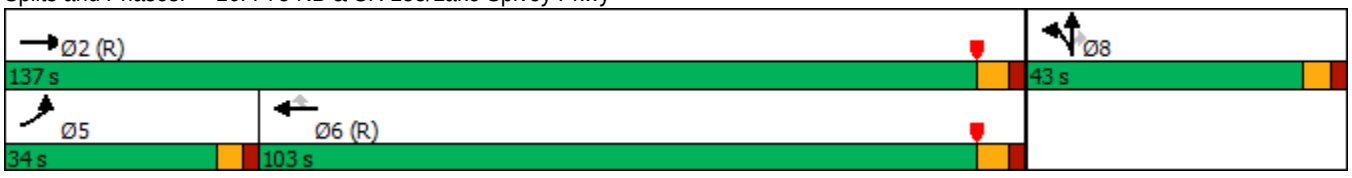
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	320	2497	1659	961	262	0	191
Future Volume (vph)	320	2497	1659	961	262	0	191
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	23.4	144.8	115.9	115.9	22.2	22.2	22.2
Actuated g/C Ratio	0.13	0.80	0.64	0.64	0.12	0.12	0.12
v/c Ratio	0.78	1.06	0.88	0.53	0.69	0.69	0.85
Control Delay	77.3	61.1	12.4	0.5	91.3	91.7	83.8
Queue Delay	0.0	19.0	46.8	0.0	0.2	0.2	0.0
Total Delay	77.3	80.1	59.2	0.5	91.5	91.8	83.8
LOS	E	F	E	A	F	F	F
Approach Delay		79.7	37.7			88.3	
Approach LOS		E	D			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 61.7	Intersection LOS: E
Intersection Capacity Utilization 92.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	348	2714	1803	1045	142	143	208
v/c Ratio	0.78	1.06	0.88	0.53	0.69	0.69	0.85
Control Delay	77.3	61.1	12.4	0.5	91.3	91.7	83.8
Queue Delay	0.0	19.0	46.8	0.0	0.2	0.2	0.0
Total Delay	77.3	80.1	59.2	0.5	91.5	91.8	83.8
Queue Length 50th (ft)	210	~1831	112	2	171	173	180
Queue Length 95th (ft)	m202	m#1363	m1127	m0	245	246	269
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	545	2570	2056	1979	344	344	369
Starvation Cap Reductn	0	469	231	0	0	0	0
Spillback Cap Reductn	0	22	547	0	18	18	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	1.29	1.19	0.53	0.44	0.44	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	2497	0	0	1659	961	262	0	191	0	0	0
Future Volume (veh/h)	320	2497	0	0	1659	961	262	0	191	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	348	2714	0	0	1803	1045	285	0	208			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	394	2542	0	0	2072	1782	514	0	229			
Arrive On Green	0.15	1.00	0.00	0.00	1.00	1.00	0.14	0.00	0.14			
Sat Flow, veh/h	3456	3329	0	0	3329	2790	3563	0	1585			
Grp Volume(v), veh/h	348	2714	0	0	1803	1045	285	0	208			
Grp Sat Flow(s),veh/h/ln	1728	1622	0	0	1622	1395	1781	0	1585			
Q Serve(g_s), s	17.8	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.3			
Cycle Q Clear(g_c), s	17.8	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	394	2542	0	0	2072	1782	514	0	229			
V/C Ratio(X)	0.88	1.07	0.00	0.00	0.87	0.59	0.55	0.00	0.91			
Avail Cap(c_a), veh/h	547	2542	0	0	2072	1782	730	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.16	0.16	1.00	0.00	1.00			
Uniform Delay (d), s/veh	75.2	0.0	0.0	0.0	0.0	0.0	71.6	0.0	75.9			
Incr Delay (d2), s/veh	1.3	31.5	0.0	0.0	0.9	0.2	0.3	0.0	18.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.6	11.1	0.0	0.0	0.3	0.1	6.0	0.0	10.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.4	31.5	0.0	0.0	0.9	0.2	72.0	0.0	94.3			
LnGrp LOS	E	F	A	A	A	A	E	A	F			
Approach Vol, veh/h		3062			2848			493				
Approach Delay, s/veh		36.6			0.7			81.4				
Approach LOS		D			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		147.9			26.0	121.9		32.1				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			19.8	2.0		25.3				
Green Ext Time (p_c), s		120.2			0.8	83.1		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

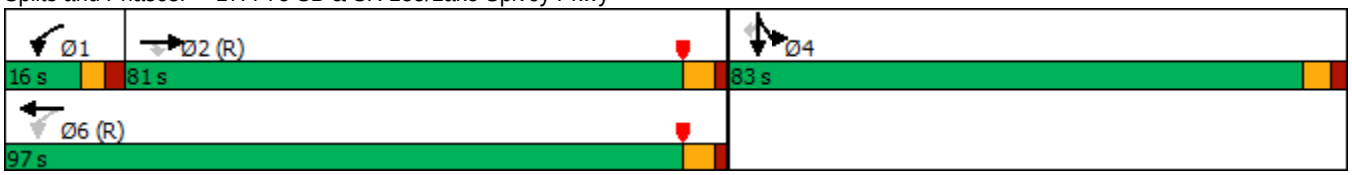
Notes

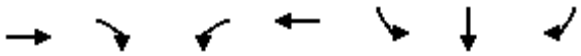
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1592	328	192	1826	1227	0	846
Future Volume (vph)	1592	328	192	1826	1227	0	846
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.5	18.5	12.0	18.5	14.2	14.2	14.2
Total Split (s)	81.0	81.0	16.0	97.0	83.0	83.0	83.0
Total Split (%)	45.0%	45.0%	8.9%	53.9%	46.1%	46.1%	46.1%
Yellow Time (s)	4.5	4.5	3.3	4.5	3.7	3.7	3.7
All-Red Time (s)	1.8	1.8	2.5	1.8	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	5.8	6.3	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	74.7	74.7	97.6	97.1	70.4	70.4	70.4
Actuated g/C Ratio	0.42	0.42	0.54	0.54	0.39	0.39	0.39
v/c Ratio	1.28	0.41	1.00	1.13	0.69	0.69	0.80
Control Delay	162.9	4.6	95.5	90.1	48.5	51.1	51.1
Queue Delay	0.0	0.0	0.0	0.1	53.2	59.5	0.0
Total Delay	162.9	4.6	95.5	90.2	101.8	110.6	51.1
LOS	F	A	F	F	F	F	D
Approach Delay	135.9			90.7		82.8	
Approach LOS	F			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 4 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 102.4	Intersection LOS: F
Intersection Capacity Utilization 92.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: I-75 SB & SR 138/Lake Spivey Pkwy





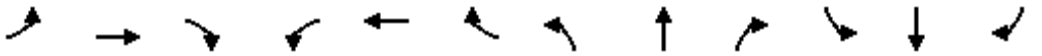
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1694	349	204	1943	874	431	900
v/c Ratio	1.28	0.41	1.00	1.13	0.69	0.69	0.80
Control Delay	162.9	4.6	95.5	90.1	48.5	51.1	51.1
Queue Delay	0.0	0.0	0.0	0.1	53.2	59.5	0.0
Total Delay	162.9	4.6	95.5	90.2	101.8	110.6	51.1
Queue Length 50th (ft)	~1310	41	~226	~1448	462	453	496
Queue Length 95th (ft)	#1461	m72	m#362	#1594	524	579	571
Internal Link Dist (ft)	1146			872		1093	
Turn Bay Length (ft)		965	145		480		
Base Capacity (vph)	1325	861	205	1723	1374	686	1220
Starvation Cap Reductn	0	0	0	30	0	0	0
Spillback Cap Reductn	0	0	0	0	817	408	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.28	0.41	1.00	1.15	1.57	1.55	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1592	328	192	1826	0	0	0	0	1227	0	846
Future Volume (veh/h)	0	1592	328	192	1826	0	0	0	0	1227	0	846
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1870	1870	1707	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1694	349	204	1943	0				1305	0	900
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	2	2	13	0				2	2	2
Cap, veh/h	0	1639	801	245	1928	0				1797	0	1066
Arrive On Green	0.00	1.00	1.00	0.06	0.59	0.00				0.34	0.00	0.34
Sat Flow, veh/h	0	3329	1585	1781	3329	0				5344	0	3170
Grp Volume(v), veh/h	0	1694	349	204	1943	0				1305	0	900
Grp Sat Flow(s),veh/h/ln	0	1622	1585	1781	1622	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	9.9	107.0	0.0				38.6	0.0	47.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.9	107.0	0.0				38.6	0.0	47.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1639	801	245	1928	0				1797	0	1066
V/C Ratio(X)	0.00	1.03	0.44	0.83	1.01	0.00				0.73	0.00	0.84
Avail Cap(c_a), veh/h	0	1639	801	245	1928	0				2280	0	1353
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.57	0.57	0.39	0.39	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	19.3	36.5	0.0				52.5	0.0	55.4
Incr Delay (d2), s/veh	0.0	26.1	1.0	9.3	14.7	0.0				0.9	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	0.2	4.7	43.7	0.0				16.9	0.0	18.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	26.1	1.0	28.6	51.3	0.0				53.3	0.0	59.5
LnGrp LOS	A	F	A	C	F	A				D	A	E
Approach Vol, veh/h		2043			2147						2205	
Approach Delay, s/veh		21.8			49.1						55.8	
Approach LOS		C			D						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	97.3		66.7		113.3
Change Period (Y+Rc), s	* 5.8	* 6.3		* 6.2		* 6.3
Max Green Setting (Gmax), s	* 10	* 75		* 77		* 91
Max Q Clear Time (g_c+I1), s	11.9	2.0		49.4		109.0
Green Ext Time (p_c), s	0.0	52.8		11.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

Notes

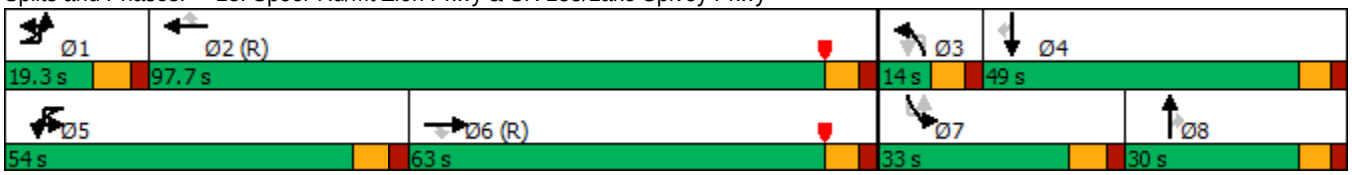
User approved volume balancing among the lanes for turning movement.

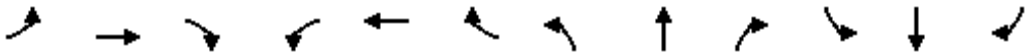
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	983	132	829	1233	328	82	194	332	454	401	181
Future Volume (vph)	159	983	132	829	1233	328	82	194	332	454	401	181
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	8.0	6.0	8.0	8.0
Minimum Split (s)	13.5	19.1	19.1	13.5	19.1	19.1	12.9	14.6	14.6	13.4	14.6	14.6
Total Split (s)	19.3	63.0	63.0	54.0	97.7	97.7	14.0	30.0	30.0	33.0	49.0	49.0
Total Split (%)	10.7%	35.0%	35.0%	30.0%	54.3%	54.3%	7.8%	16.7%	16.7%	18.3%	27.2%	27.2%
Yellow Time (s)	5.0	4.6	4.6	5.0	4.6	4.6	4.4	4.1	4.1	4.9	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.1	7.1	7.5	7.1	7.1	6.9	6.6	6.6	7.4	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	13.6	56.6	56.6	50.8	93.9	93.9	7.9	16.2	16.2	27.7	36.5	36.5
Actuated g/C Ratio	0.08	0.31	0.31	0.28	0.52	0.52	0.04	0.09	0.09	0.15	0.20	0.20
v/c Ratio	0.65	0.74	0.22	0.90	0.54	0.35	0.57	0.64	0.61	0.91	0.59	0.43
Control Delay	100.0	55.8	7.2	65.6	33.7	5.5	99.3	88.0	11.3	95.2	68.4	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.0	55.8	7.2	65.6	33.7	5.5	99.3	88.0	11.3	95.2	68.4	16.1
LOS	F	E	A	E	C	A	F	F	B	F	E	B
Approach Delay		56.3			40.9			47.6			71.0	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 156 (87%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 51.2	Intersection LOS: D
Intersection Capacity Utilization 90.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Speer Rd/Mt Zion Pkwy & SR 138/Lake Spivey Pkwy



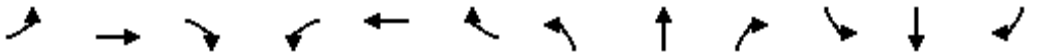


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	167	1035	139	873	1298	345	86	204	349	478	422	191
v/c Ratio	0.65	0.74	0.22	0.90	0.54	0.35	0.57	0.64	0.61	0.91	0.59	0.43
Control Delay	100.0	55.8	7.2	65.6	33.7	5.5	99.3	88.0	11.3	95.2	68.4	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.0	55.8	7.2	65.6	33.7	5.5	99.3	88.0	11.3	95.2	68.4	16.1
Queue Length 50th (ft)	95	352	22	547	380	36	52	124	0	290	242	32
Queue Length 95th (ft)	137	421	m50	m511	m358	m40	#89	168	55	#417	296	111
Internal Link Dist (ft)		1742			1146			866			373	
Turn Bay Length (ft)	235		270	200		935	175		550	205		260
Base Capacity (vph)	263	1428	640	969	2395	991	151	460	665	528	833	493
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.72	0.22	0.90	0.54	0.35	0.57	0.44	0.52	0.91	0.51	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	983	132	829	1233	328	82	194	332	454	401	181
Future Volume (veh/h)	159	983	132	829	1233	328	82	194	332	454	401	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	167	1035	139	873	1298	345	86	204	349	478	422	191
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	203	1411	492	892	2378	809	122	462	363	491	852	380
Arrive On Green	0.12	0.62	0.62	0.52	1.00	1.00	0.04	0.13	0.13	0.14	0.24	0.24
Sat Flow, veh/h	3456	4540	1585	3456	4661	1585	3456	3554	2790	3456	3554	1585
Grp Volume(v), veh/h	167	1035	139	873	1298	345	86	204	349	478	422	191
Grp Sat Flow(s),veh/h/ln	1728	1513	1585	1728	1554	1585	1728	1777	1395	1728	1777	1585
Q Serve(g_s), s	8.5	28.6	7.2	44.5	0.0	0.0	4.4	9.5	22.4	24.8	18.4	18.8
Cycle Q Clear(g_c), s	8.5	28.6	7.2	44.5	0.0	0.0	4.4	9.5	22.4	24.8	18.4	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	1411	492	892	2378	809	122	462	363	491	852	380
V/C Ratio(X)	0.82	0.73	0.28	0.98	0.55	0.43	0.70	0.44	0.96	0.97	0.50	0.50
Avail Cap(c_a), veh/h	227	1411	492	893	2378	809	136	462	363	491	852	380
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.5	28.9	24.9	43.0	0.0	0.0	85.9	72.3	77.9	76.9	59.0	59.2
Incr Delay (d2), s/veh	13.7	2.3	0.9	5.2	0.1	0.1	13.5	0.7	37.3	33.5	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	7.8	2.6	15.7	0.0	0.0	2.2	4.4	9.8	13.2	8.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	31.2	25.8	48.2	0.1	0.1	99.4	72.9	115.2	110.3	59.5	60.2
LnGrp LOS	F	C	C	D	A	A	F	E	F	F	E	E
Approach Vol, veh/h		1341			2516			639			1091	
Approach Delay, s/veh		38.2			16.8			99.5			81.9	
Approach LOS		D			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	98.9	13.3	49.7	54.0	63.0	33.0	30.0
Change Period (Y+Rc), s	7.5	7.1	6.9	6.6	7.5	7.1	7.4	6.6
Max Green Setting (Gmax), s	11.8	90.6	7.1	42.4	46.5	55.9	25.6	23.4
Max Q Clear Time (g_c+I1), s	10.5	2.0	6.4	20.8	46.5	30.6	26.8	24.4
Green Ext Time (p_c), s	0.1	38.7	0.0	3.2	0.0	14.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	129	507	367	131	137	214
Future Vol, veh/h	129	507	367	131	137	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	143	563	408	146	152	238

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	1257	408
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	849	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1026	-	-	-	189	643
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	419	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	163	643
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	419	-

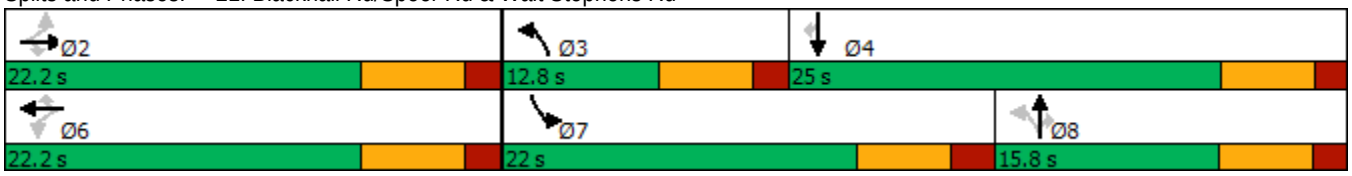
Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	51.2
HCM LOS			F

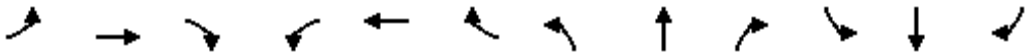
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1026	-	-	-	163	643
HCM Lane V/C Ratio	0.14	-	-	-	0.934	0.37
HCM Control Delay (s)	9.1	-	-	-	109.7	13.8
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	6.9	1.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	529	88	148	436	359	48	195	124	760	475	21
Future Volume (vph)	33	529	88	148	436	359	48	195	124	760	475	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8			4
Detector Phase	2	2	2	6	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	21.3	21.3	21.3	21.3	21.3	21.3	12.8	15.8	15.8	13.2	15.7	15.7
Total Split (s)	22.2	22.2	22.2	22.2	22.2	22.2	12.8	15.8	15.8	22.0	25.0	25.0
Total Split (%)	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	21.3%	26.3%	26.3%	36.7%	41.7%	41.7%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	5.8	5.8	5.8	6.2	5.7	5.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	15.9	15.9	15.9	15.9	17.0	10.0	10.0	15.5	24.1	24.1
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.17	0.17	0.26	0.40	0.40
v/c Ratio	0.26	1.07	0.14	1.18	0.88	0.36	0.13	0.63	0.25	0.86	0.64	0.03
Control Delay	23.9	84.8	0.5	166.9	43.3	3.5	9.7	34.1	1.2	33.4	22.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	84.8	0.5	166.9	43.3	3.5	9.7	34.1	1.2	33.4	22.3	0.0
LOS	C	F	A	F	D	A	A	C	A	C	C	A
Approach Delay		70.3			47.5			19.8			28.6	
Approach LOS		E			D			B			C	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 59.7		
Natural Cycle: 90		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.18		
Intersection Signal Delay: 41.6	Intersection LOS: D	
Intersection Capacity Utilization 92.8%	ICU Level of Service F	
Analysis Period (min) 15		

Splits and Phases: 21: Blackhall Rd/Speer Rd & Walt Stephens Rd



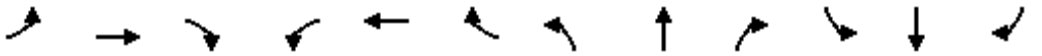


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	534	89	149	440	363	48	197	125	768	480	21
v/c Ratio	0.26	1.07	0.14	1.18	0.88	0.36	0.13	0.63	0.25	0.86	0.64	0.03
Control Delay	23.9	84.8	0.5	166.9	43.3	3.5	9.7	34.1	1.2	33.4	22.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	84.8	0.5	166.9	43.3	3.5	9.7	34.1	1.2	33.4	22.3	0.0
Queue Length 50th (ft)	9	~222	0	~67	152	0	8	67	0	135	156	0
Queue Length 95th (ft)	31	#386	0	#165	#301	29	20	#142	0	#223	#298	0
Internal Link Dist (ft)		4262			2243			482			785	
Turn Bay Length (ft)	110		115	190		250	155		160	485		105
Base Capacity (vph)	126	501	623	126	501	1016	360	312	496	909	753	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	1.07	0.14	1.18	0.88	0.36	0.13	0.63	0.25	0.84	0.64	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	529	88	148	436	359	48	195	124	760	475	21
Future Volume (veh/h)	33	529	88	148	436	359	48	195	124	760	475	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	534	89	149	440	363	48	197	125	768	480	21
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	153	506	429	122	506	754	367	316	267	878	683	579
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.17	0.17	0.25	0.37	0.37
Sat Flow, veh/h	683	1885	1598	808	1885	2812	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	33	534	89	149	440	363	48	197	125	768	480	21
Grp Sat Flow(s),veh/h/ln	683	1885	1598	808	1885	1406	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	2.7	15.9	2.6	0.0	13.2	6.4	1.3	5.8	4.2	12.6	13.0	0.5
Cycle Q Clear(g_c), s	15.9	15.9	2.6	15.9	13.2	6.4	1.3	5.8	4.2	12.6	13.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	506	429	122	506	754	367	316	267	878	683	579
V/C Ratio(X)	0.22	1.06	0.21	1.23	0.87	0.48	0.13	0.62	0.47	0.87	0.70	0.04
Avail Cap(c_a), veh/h	153	506	429	122	506	754	463	316	267	921	683	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	21.7	16.8	29.6	20.7	18.2	17.9	22.9	22.2	21.2	16.1	12.1
Incr Delay (d2), s/veh	1.5	55.5	0.5	154.7	16.0	1.0	0.2	3.8	1.3	9.1	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	13.7	0.9	6.8	7.1	1.9	0.5	2.6	1.5	5.4	5.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	77.2	17.3	184.3	36.7	19.2	18.1	26.7	23.5	30.3	19.3	12.1
LnGrp LOS	C	F	B	F	D	B	B	C	C	C	B	B
Approach Vol, veh/h		656			952			370			1269	
Approach Delay, s/veh		66.7			53.2			24.5			25.8	
Approach LOS		E			D			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.2	9.6	27.4		22.2	21.3	15.8				
Change Period (Y+Rc), s		* 6.3	* 5.8	* 5.8		* 6.3	6.2	* 5.8				
Max Green Setting (Gmax), s		* 16	* 7	* 19		* 16	15.8	* 10				
Max Q Clear Time (g_c+I1), s		17.9	3.3	15.0		17.9	14.6	7.8				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.0	0.4	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

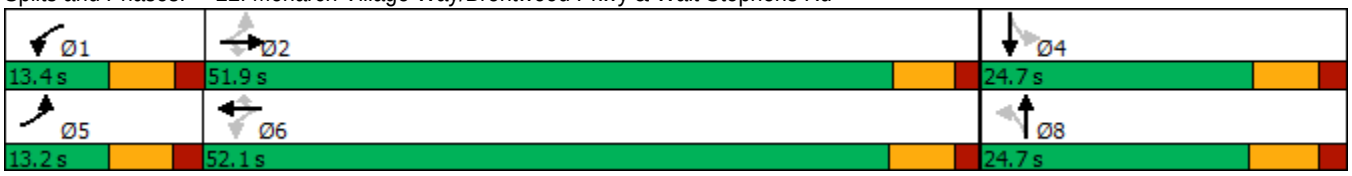
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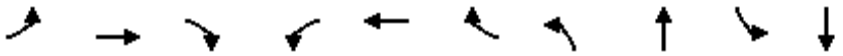
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	83	1131	102	46	750	115	82	15	87	15
Future Volume (vph)	83	1131	102	46	750	115	82	15	87	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	7.0	15.0	15.0	7.0	15.0	15.0	10.0	10.0	10.0	10.0
Minimum Split (s)	13.2	24.2	24.2	13.4	24.4	24.4	24.7	24.7	24.4	24.4
Total Split (s)	13.2	51.9	51.9	13.4	52.1	52.1	24.7	24.7	24.7	24.7
Total Split (%)	14.7%	57.7%	57.7%	14.9%	57.9%	57.9%	27.4%	27.4%	27.4%	27.4%
Yellow Time (s)	4.2	4.2	4.2	4.4	4.4	4.4	4.7	4.7	4.4	4.4
All-Red Time (s)	2.0	1.7	1.7	2.0	1.7	1.7	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	5.9	5.9	6.4	6.1	6.1	6.7	6.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	53.6	51.4	51.4	52.1	48.4	48.4	11.7	11.7	11.9	11.9
Actuated g/C Ratio	0.69	0.66	0.66	0.67	0.62	0.62	0.15	0.15	0.15	0.15
v/c Ratio	0.20	0.92	0.09	0.18	0.65	0.11	0.42	0.23	0.44	0.26
Control Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
LOS	A	C	A	A	B	A	D	B	D	B
Approach Delay		28.4			14.7			28.3		27.3
Approach LOS		C			B			C		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 90.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Monarch Village Way/Brentwood Pkwy & Walt Stephens Rd



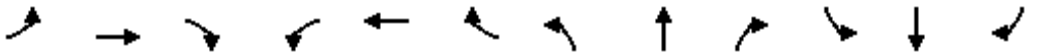


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	1142	103	46	758	116	83	68	88	79
v/c Ratio	0.20	0.92	0.09	0.18	0.65	0.11	0.42	0.23	0.44	0.26
Control Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	32.5	1.9	6.4	17.2	2.3	39.2	15.0	39.2	14.1
Queue Length 50th (ft)	11	~674	0	6	269	0	41	7	43	7
Queue Length 95th (ft)	28	#992	18	18	468	23	84	42	88	45
Internal Link Dist (ft)		2243			4300			235		324
Turn Bay Length (ft)	145		160	245		170				
Base Capacity (vph)	418	1240	1095	251	1240	1095	307	425	315	437
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.92	0.09	0.18	0.61	0.11	0.27	0.16	0.28	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1131	102	46	750	115	82	15	52	87	15	63
Future Volume (veh/h)	83	1131	102	46	750	115	82	15	52	87	15	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1142	103	46	758	116	83	15	53	88	15	64
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	387	1078	913	190	1049	889	208	48	171	218	41	177
Arrive On Green	0.07	0.57	0.57	0.06	0.56	0.56	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1795	1885	1598	1795	1885	1598	1320	362	1278	1333	310	1322
Grp Volume(v), veh/h	84	1142	103	46	758	116	83	0	68	88	0	79
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1795	1885	1598	1320	0	1640	1333	0	1632
Q Serve(g_s), s	1.5	46.0	2.4	0.8	24.0	2.8	4.9	0.0	3.0	5.1	0.0	3.5
Cycle Q Clear(g_c), s	1.5	46.0	2.4	0.8	24.0	2.8	8.5	0.0	3.0	8.2	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.81
Lane Grp Cap(c), veh/h	387	1078	913	190	1049	889	208	0	220	218	0	219
V/C Ratio(X)	0.22	1.06	0.11	0.24	0.72	0.13	0.40	0.00	0.31	0.40	0.00	0.36
Avail Cap(c_a), veh/h	411	1078	913	246	1078	913	327	0	367	343	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	17.2	7.9	18.7	13.2	8.5	35.6	0.0	31.5	35.2	0.0	31.7
Incr Delay (d2), s/veh	0.1	44.7	0.1	0.2	3.0	0.1	1.2	0.0	0.8	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	28.5	0.7	0.4	8.9	0.8	1.6	0.0	1.2	1.7	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	61.9	8.0	18.9	16.2	8.7	36.8	0.0	32.3	36.4	0.0	32.7
LnGrp LOS	B	F	A	B	B	A	D	A	C	D	A	C
Approach Vol, veh/h		1329			920			151			167	
Approach Delay, s/veh		54.5			15.4			34.8			34.6	
Approach LOS		D			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	52.1		17.5	12.1	50.9		17.5				
Change Period (Y+Rc), s	6.4	* 6.1		* 6.7	6.2	* 6.1		6.7				
Max Green Setting (Gmax), s	7.0	* 46		* 18	7.0	* 46		18.0				
Max Q Clear Time (g_c+I1), s	2.8	48.0		10.2	3.5	26.0		10.5				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	9.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		38.0	
HCM 6th LOS		D	

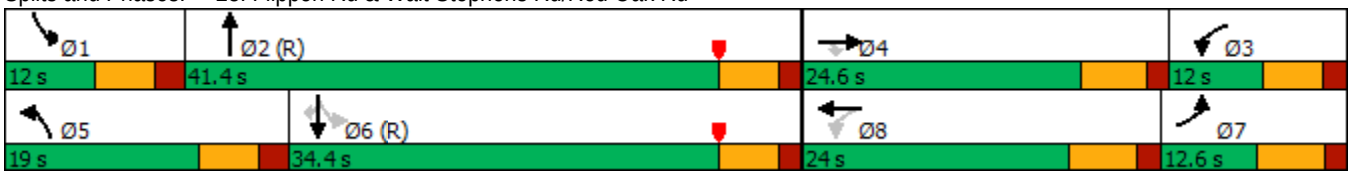
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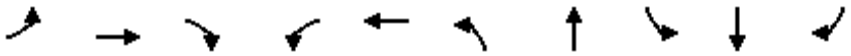
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	390	397	723	48	217	510	446	60	640	364
Future Volume (vph)	390	397	723	48	217	510	446	60	640	364
Turn Type	Prot	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			4	8				6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	12.0	27.6	27.6	23.0	16.5	13.0	34.0	30.2	24.6	24.6
Actuated g/C Ratio	0.13	0.31	0.31	0.26	0.18	0.14	0.38	0.34	0.27	0.27
v/c Ratio	0.90	0.74	1.10	0.25	0.79	1.11	0.75	0.27	0.70	0.37
Control Delay	67.6	41.6	85.8	26.0	51.0	111.4	14.3	15.4	33.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.6	41.6	85.8	26.0	51.0	111.4	14.3	15.4	33.3	3.6
LOS	E	D	F	C	D	F	B	B	C	A
Approach Delay		69.5			47.0		64.0		22.1	
Approach LOS		E			D		E		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 53.3	Intersection LOS: D
Intersection Capacity Utilization 82.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	419	427	777	52	273	548	523	65	688	391
v/c Ratio	0.90	0.74	1.10	0.25	0.79	1.11	0.75	0.27	0.70	0.37
Control Delay	67.6	41.6	85.8	26.0	51.0	111.4	14.3	15.4	33.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.6	41.6	85.8	26.0	51.0	111.4	14.3	15.4	33.3	3.6
Queue Length 50th (ft)	~142	237	~407	18	141	~177	125	19	183	0
Queue Length 95th (ft)	#273	#458	#656	45	#253	m#204	m158	37	230	33
Internal Link Dist (ft)		1986			3175		1869		1346	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	463	576	707	208	377	495	744	244	1143	1166
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.74	1.10	0.25	0.72	1.11	0.70	0.27	0.60	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	397	723	48	217	37	510	446	40	60	640	364
Future Volume (veh/h)	390	397	723	48	217	37	510	446	40	60	640	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	419	427	0	52	233	40	548	480	43	65	688	391
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	288	390		167	269	46	499	724	65	355	1207	948
Arrive On Green	0.08	0.21	0.00	0.05	0.17	0.17	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	3483	1885	1598	1795	1568	269	3456	1692	152	1795	3582	2812
Grp Volume(v), veh/h	419	427	0	52	0	273	548	0	523	65	688	391
Grp Sat Flow(s),veh/h/ln	1742	1885	1598	1795	0	1837	1728	0	1843	1795	1791	1406
Q Serve(g_s), s	7.4	18.6	0.0	0.0	0.0	13.0	13.0	0.0	20.4	2.1	14.2	6.5
Cycle Q Clear(g_c), s	7.4	18.6	0.0	0.0	0.0	13.0	13.0	0.0	20.4	2.1	14.2	6.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	288	390		167	0	315	499	0	789	355	1207	948
V/C Ratio(X)	1.45	1.10		0.31	0.00	0.87	1.10	0.00	0.66	0.18	0.57	0.41
Avail Cap(c_a), veh/h	288	390		204	0	365	499	0	789	378	1207	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	1.00	0.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	35.7	0.0	40.7	0.0	36.3	38.5	0.0	20.6	18.2	24.5	10.6
Incr Delay (d2), s/veh	206.1	47.5	0.0	1.0	0.0	17.5	47.4	0.0	0.4	0.2	2.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	13.1	0.0	1.1	0.0	7.2	8.5	0.0	7.9	0.8	5.9	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	247.4	83.2	0.0	41.8	0.0	53.8	85.9	0.0	21.0	18.5	26.4	11.9
LnGrp LOS	F	F		D	A	D	F	A	C	B	C	B
Approach Vol, veh/h		846	A		325			1071			1144	
Approach Delay, s/veh		164.5			51.9			54.2			21.0	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	44.1	10.5	24.6	19.0	35.9	13.5	21.5
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.0	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	4.1	22.4	2.0	20.6	15.0	16.2	9.4	15.0
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	7.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	35
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	165	616	73	14	453	92	54	5	22	92	11	139
Future Vol, veh/h	165	616	73	14	453	92	54	5	22	92	11	139
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	176	655	78	15	482	98	57	5	23	98	12	148
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	44.7	30.3	17	17.5
HCM LOS	E	D	C	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	67%	100%	0%	0%	100%	0%	0%	89%	0%
Vol Thru, %	6%	0%	100%	74%	0%	100%	62%	11%	0%
Vol Right, %	27%	0%	0%	26%	0%	0%	38%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	165	411	278	14	302	243	103	139
LT Vol	54	165	0	0	14	0	0	92	0
Through Vol	5	0	411	205	0	302	151	11	0
RT Vol	22	0	0	73	0	0	92	0	139
Lane Flow Rate	86	176	437	296	15	321	259	110	148
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.254	0.423	0.99	0.656	0.038	0.781	0.608	0.314	0.375
Departure Headway (Hd)	10.604	8.676	8.161	7.972	9.262	8.747	8.473	10.307	9.133
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	339	416	446	453	386	414	427	348	393
Service Time	8.383	6.425	5.91	5.721	7.019	6.503	6.23	8.08	6.906
HCM Lane V/C Ratio	0.254	0.423	0.98	0.653	0.039	0.775	0.607	0.316	0.377
HCM Control Delay	17	17.7	69.2	24.7	12.4	36.5	23.6	17.8	17.3
HCM Lane LOS	C	C	F	C	B	E	C	C	C
HCM 95th-tile Q	1	2.1	12.5	4.6	0.1	6.7	3.9	1.3	1.7

Intersection	
Int Delay, s/veh	14.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	0	10	13	0	67	11	779	16	89	1035	30
Future Vol, veh/h	32	0	10	13	0	67	11	779	16	89	1035	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	1	1	0
Mvmt Flow	36	0	11	14	0	74	12	866	18	99	1150	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2284	2256	1150	2260	2271	866	1183	0	0	884	0	0
Stage 1	1348	1348	-	890	890	-	-	-	-	-	-	-
Stage 2	936	908	-	1370	1381	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 28	42	244	29	41	353	597	-	-	770	-	-
Stage 1	188	221	-	337	364	-	-	-	-	-	-	-
Stage 2	321	357	-	181	213	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 20	36	244	25	35	353	597	-	-	770	-	-
Mov Cap-2 Maneuver	~ 20	36	-	25	35	-	-	-	-	-	-	-
Stage 1	184	192	-	330	357	-	-	-	-	-	-	-
Stage 2	248	350	-	151	186	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 597.6	58.8	0.2	0.8
HCM LOS	F	F		

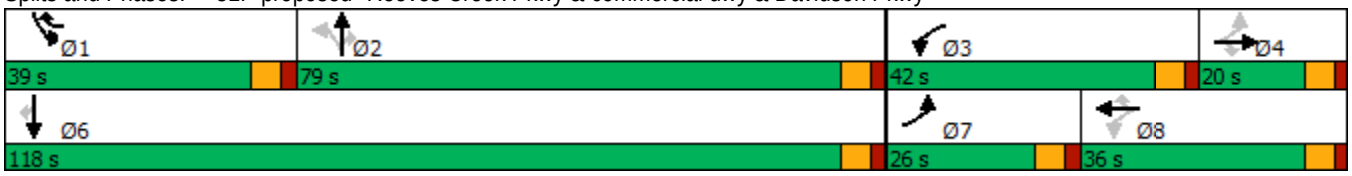
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	597	-	-	20	244	25	353	770	-	-
HCM Lane V/C Ratio	0.02	-	-	1.778	0.046	0.578	0.211	0.128	-	-
HCM Control Delay (s)	11.2	-	-	$ 777.9	20.5	269.6	17.9	10.4	-	-
HCM Lane LOS	B	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.8	0.1	1.8	0.8	0.4	-	-

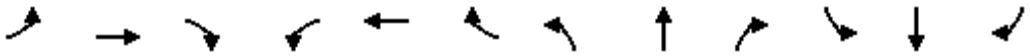
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	71	24	296	57	292	19	1056	360	424	645	142
Future Volume (vph)	176	71	24	296	57	292	19	1056	360	424	645	142
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Perm	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1		2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	7	4	4	3	8	1	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	20.0	11.0	20.0	11.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	26.0	20.0	20.0	42.0	36.0	39.0	79.0	79.0	79.0	39.0	118.0	118.0
Total Split (%)	14.4%	11.1%	11.1%	23.3%	20.0%	21.7%	43.9%	43.9%	43.9%	21.7%	65.6%	65.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	33.2	11.7	11.7	46.0	22.5	53.9	78.0	78.0	78.0	28.2	112.2	112.2
Actuated g/C Ratio	0.19	0.07	0.07	0.27	0.13	0.31	0.45	0.45	0.45	0.16	0.65	0.65
v/c Ratio	0.61	0.62	0.12	0.83	0.26	0.59	0.06	0.72	0.47	0.83	0.31	0.14
Control Delay	60.1	100.2	1.1	74.6	68.9	41.5	32.2	43.7	15.5	83.2	14.4	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	100.2	1.1	74.6	68.9	41.5	32.2	43.7	15.5	83.2	14.4	2.0
LOS	E	F	A	E	E	D	C	D	B	F	B	A
Approach Delay		65.3			59.1			36.5			37.1	
Approach LOS		E			E			D			D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 173.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 43.0	Intersection LOS: D
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

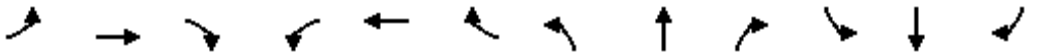
Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	79	27	329	63	324	21	1173	400	471	717	158
v/c Ratio	0.61	0.62	0.12	0.83	0.26	0.59	0.06	0.72	0.47	0.83	0.31	0.14
Control Delay	60.1	100.2	1.1	74.6	68.9	41.5	32.2	43.7	15.5	83.2	14.4	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	100.2	1.1	74.6	68.9	41.5	32.2	43.7	15.5	83.2	14.4	2.0
Queue Length 50th (ft)	180	90	0	330	65	236	14	592	125	273	188	0
Queue Length 95th (ft)	259	155	0	443	116	330	38	734	240	342	241	30
Internal Link Dist (ft)		400			937			996			1614	
Turn Bay Length (ft)												
Base Capacity (vph)	325	153	247	435	329	593	324	1626	859	668	2339	1101
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.52	0.11	0.76	0.19	0.55	0.06	0.72	0.47	0.71	0.31	0.14

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	71	24	296	57	292	19	1056	360	424	645	142
Future Volume (veh/h)	176	71	24	296	57	292	19	1056	360	424	645	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	196	79	27	329	63	324	21	1173	400	471	717	158
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	338	194	164	435	318	510	325	1596	712	524	2256	1006
Arrive On Green	0.11	0.10	0.10	0.17	0.17	0.17	0.44	0.44	0.44	0.15	0.62	0.62
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	644	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	196	79	27	329	63	324	21	1173	400	471	717	158
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	644	1805	1610	1755	1805	1610
Q Serve(g_s), s	17.2	7.0	2.7	28.4	5.1	30.0	3.4	48.1	33.1	23.6	16.7	7.3
Cycle Q Clear(g_c), s	17.2	7.0	2.7	28.4	5.1	30.0	3.4	48.1	33.1	23.6	16.7	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	194	164	435	318	510	325	1596	712	524	2256	1006
V/C Ratio(X)	0.58	0.41	0.16	0.76	0.20	0.64	0.06	0.73	0.56	0.90	0.32	0.16
Avail Cap(c_a), veh/h	345	194	164	486	318	510	325	1596	712	646	2256	1006
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	75.4	73.5	56.2	64.3	52.4	28.8	41.3	37.1	74.9	15.7	14.0
Incr Delay (d2), s/veh	2.3	1.4	0.5	6.0	0.3	2.6	0.4	3.0	3.2	13.6	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	3.5	1.2	13.8	2.5	12.9	0.6	21.7	13.8	11.8	7.3	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	76.8	73.9	62.1	64.6	55.0	29.2	44.4	40.3	88.5	16.1	14.3
LnGrp LOS	E	E	E	E	E	E	C	D	D	F	B	B
Approach Vol, veh/h		302			716			1594			1346	
Approach Delay, s/veh		69.0			59.1			43.1			41.2	
Approach LOS		E			E			D			D	

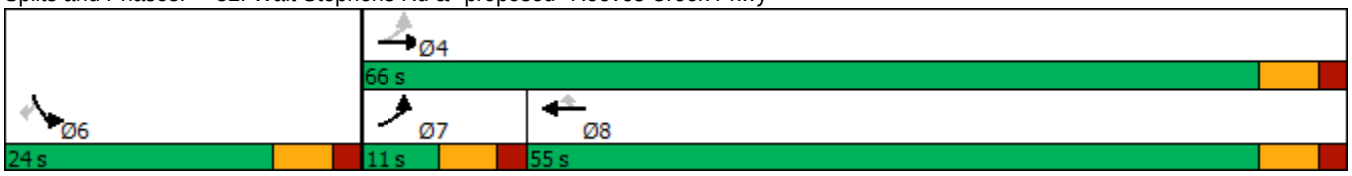
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	32.7	85.3	36.9	24.3		118.0	25.3	36.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	33.0	73.0	36.0	14.0		112.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s	25.6	50.1	30.4	9.0		18.7	19.2	32.0				
Green Ext Time (p_c), s	1.1	10.3	0.5	0.2		7.1	0.0	0.0				

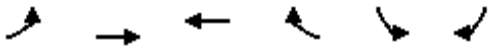
Intersection Summary												
HCM 6th Ctrl Delay			47.4									
HCM 6th LOS			D									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	127	1184	913	177	325	201
Future Volume (vph)	127	1184	913	177	325	201
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	11.0	66.0	55.0	55.0	24.0	24.0
Total Split (%)	12.2%	73.3%	61.1%	61.1%	26.7%	26.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	60.0	60.0	49.0	49.0	18.0	18.0
Actuated g/C Ratio	0.67	0.67	0.54	0.54	0.20	0.20
v/c Ratio	0.76	1.04	0.98	0.20	1.00	0.47
Control Delay	39.5	53.4	45.4	2.4	85.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	53.4	45.4	2.4	85.6	11.5
LOS	D	D	D	A	F	B
Approach Delay		52.1	38.4		57.3	
Approach LOS		D	D		E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 47.9	Intersection LOS: D
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 32: Walt Stephens Rd & *proposed* Reeves Creek Pkwy



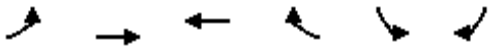


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	141	1316	1014	197	361	223
v/c Ratio	0.76	1.04	0.98	0.20	1.00	0.47
Control Delay	39.5	53.4	45.4	2.4	85.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	53.4	45.4	2.4	85.6	11.5
Queue Length 50th (ft)	26	~816	529	2	207	18
Queue Length 95th (ft)	#123	#1065	#829	32	#385	81
Internal Link Dist (ft)		4300	1986		780	
Turn Bay Length (ft)						
Base Capacity (vph)	185	1266	1034	964	361	470
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.04	0.98	0.20	1.00	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	127	1184	913	177	325	201
Future Volume (veh/h)	127	1184	913	177	325	201
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	1316	1014	197	361	223
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	190	1267	1038	879	362	322
Arrive On Green	0.05	0.67	0.55	0.55	0.20	0.20
Sat Flow, veh/h	1810	1900	1900	1610	1810	1610
Grp Volume(v), veh/h	141	1316	1014	197	361	223
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	1610	1810	1610
Q Serve(g_s), s	2.9	60.0	46.8	5.7	17.9	11.6
Cycle Q Clear(g_c), s	2.9	60.0	46.8	5.7	17.9	11.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	190	1267	1038	879	362	322
V/C Ratio(X)	0.74	1.04	0.98	0.22	1.00	0.69
Avail Cap(c_a), veh/h	193	1267	1038	879	362	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	15.0	19.9	10.6	36.0	33.4
Incr Delay (d2), s/veh	14.0	36.0	22.5	0.1	46.7	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	30.7	23.4	1.8	12.1	11.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.4	51.0	42.4	10.7	82.7	45.0
LnGrp LOS	D	F	D	B	F	D
Approach Vol, veh/h		1457	1211		584	
Approach Delay, s/veh		49.5	37.2		68.3	
Approach LOS		D	D		E	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	66.0	24.0	10.9	55.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	60.0	18.0	5.0	49.0
Max Q Clear Time (g_c+I1), s	62.0	19.9	4.9	48.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

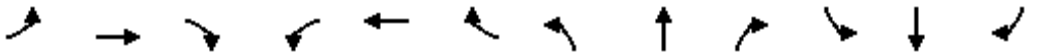
Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	0	21	25	0	2	25	807	41	2	1028	32
Future Vol, veh/h	27	0	21	25	0	2	25	807	41	2	1028	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	30	0	23	28	0	2	28	897	46	2	1142	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2123	2145	1142	2129	2135	897	1178	0	0	943	0	0
Stage 1	1146	1146	-	953	953	-	-	-	-	-	-	-
Stage 2	977	999	-	1176	1182	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	37	49	246	37	50	341	600	-	-	736	-	-
Stage 1	245	276	-	314	340	-	-	-	-	-	-	-
Stage 2	304	324	-	235	266	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	46	246	32	47	341	600	-	-	736	-	-
Mov Cap-2 Maneuver	35	46	-	32	47	-	-	-	-	-	-	-
Stage 1	233	274	-	299	324	-	-	-	-	-	-	-
Stage 2	288	309	-	211	264	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	165.4	278.5	0.3	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	600	-	-	35	246	32	341	736	-	-
HCM Lane V/C Ratio	0.046	-	-	0.857	0.095	0.868	0.007	0.003	-	-
HCM Control Delay (s)	11.3	-	-	277.5	21.2	299.5	15.6	9.9	0	-
HCM Lane LOS	B	-	-	F	C	F	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	0.3	3	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	844	787	25	1324	53	470	11	25	20	12	95
Future Volume (veh/h)	76	844	787	25	1324	53	470	11	25	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	888	0	26	1394	56	495	12	26	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	346	2449		469	2401	920	589	126	274	161	144	122
Arrive On Green	0.07	0.99	0.00	0.06	1.00	1.00	0.12	0.24	0.24	0.08	0.08	0.08
Sat Flow, veh/h	1781	4135	1585	1781	4135	1585	5023	526	1139	1370	1870	1585
Grp Volume(v), veh/h	80	888	0	26	1394	56	495	0	38	21	13	100
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1781	1378	1585	1674	0	1665	1370	1870	1585
Q Serve(g_s), s	2.3	0.5	0.0	0.7	0.0	0.0	12.5	0.0	2.3	1.9	0.8	8.1
Cycle Q Clear(g_c), s	2.3	0.5	0.0	0.7	0.0	0.0	12.5	0.0	2.3	1.9	0.8	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		1.00
Lane Grp Cap(c), veh/h	346	2449		469	2401	920	589	0	400	161	144	122
V/C Ratio(X)	0.23	0.36		0.06	0.58	0.06	0.84	0.00	0.09	0.13	0.09	0.82
Avail Cap(c_a), veh/h	364	2449		508	2401	920	696	0	432	161	144	122
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	0.3	0.0	9.8	0.0	0.0	56.2	0.0	38.4	56.2	55.8	59.1
Incr Delay (d2), s/veh	0.3	0.4	0.0	0.0	0.4	0.0	7.9	0.0	0.1	0.4	0.3	34.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.0	0.3	0.1	0.0	5.8	0.0	1.0	0.7	0.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	0.7	0.0	9.8	0.4	0.0	64.1	0.0	38.5	56.6	56.0	93.1
LnGrp LOS	A	A		A	A	A	E	A	D	E	E	F
Approach Vol, veh/h		968	A		1476			533			134	
Approach Delay, s/veh		1.4			0.6			62.3			83.8	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	83.3	21.3	16.3	10.7	81.8		37.6				
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 72	18.0	* 10	7.0	* 72		* 34				
Max Q Clear Time (g_c+I1), s	2.7	2.5	14.5	10.1	4.3	2.0		4.3				
Green Ext Time (p_c), s	0.0	15.4	0.7	0.0	0.0	32.3		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	552	1561	0	0	1539	387	43	0	152	0	0	0
Future Volume (veh/h)	552	1561	0	0	1539	387	43	0	152	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	600	1697	0	0	1673	421	47	0	165			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	535	3413	0	0	1490	821	131	0	206			
Arrive On Green	0.54	1.00	0.00	0.00	0.52	0.52	0.07	0.00	0.07			
Sat Flow, veh/h	1781	4271	0	0	2954	1585	1781	0	2790			
Grp Volume(v), veh/h	600	1697	0	0	1673	421	47	0	165			
Grp Sat Flow(s),veh/h/ln	1781	1378	0	0	1439	1585	1781	0	1395			
Q Serve(g_s), s	35.0	0.0	0.0	0.0	67.3	22.7	3.3	0.0	7.6			
Cycle Q Clear(g_c), s	35.0	0.0	0.0	0.0	67.3	22.7	3.3	0.0	7.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	535	3413	0	0	1490	821	131	0	206			
V/C Ratio(X)	1.12	0.50	0.00	0.00	1.12	0.51	0.36	0.00	0.80			
Avail Cap(c_a), veh/h	535	3435	0	0	1490	821	136	0	212			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.47	0.47	0.00	0.00	0.74	0.74	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	0.0	0.0	0.0	31.3	20.6	57.3	0.0	59.3			
Incr Delay (d2), s/veh	66.7	0.2	0.0	0.0	62.5	1.7	1.6	0.0	18.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	19.7	0.1	0.0	0.0	34.3	8.3	1.5	0.0	3.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	0.2	0.0	0.0	93.8	22.3	58.9	0.0	78.2			
LnGrp LOS	F	A	A	A	F	C	E	A	E			
Approach Vol, veh/h		2297			2094			212				
Approach Delay, s/veh		24.3			79.4			73.9				
Approach LOS		C			E			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.3			40.0	74.3		15.7				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			37.0	69.3		9.6				
Green Ext Time (p_c), s		52.1			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1760	74	244	1345	0	0	0	0	369	0	536
Future Volume (veh/h)	0	1760	74	244	1345	0	0	0	0	369	0	536
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1870	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1934	81	268	1478	0				405	0	589
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	2	2	26	0				2	2	2
Cap, veh/h	0	2416	926	290	1991	0				757	0	674
Arrive On Green	0.00	1.00	1.00	0.04	0.46	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1585	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	1934	81	268	1478	0				405	0	589
Grp Sat Flow(s),veh/h/ln	0	1378	1585	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	7.5	54.6	0.0				13.1	0.0	23.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.5	54.6	0.0				13.1	0.0	23.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2416	926	290	1991	0				757	0	674
V/C Ratio(X)	0.00	0.80	0.09	0.92	0.74	0.00				0.53	0.00	0.87
Avail Cap(c_a), veh/h	0	2416	926	290	1991	0				836	0	744
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.51	0.51	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.2	25.4	0.0				45.5	0.0	49.5
Incr Delay (d2), s/veh	0.0	1.5	0.1	5.0	0.2	0.0				0.7	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	3.2	19.2	0.0				5.8	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.5	0.1	20.2	25.6	0.0				46.2	0.0	60.3
LnGrp LOS	A	A	A	C	C	A				D	A	E
Approach Vol, veh/h		2015			1746						994	
Approach Delay, s/veh		1.4			24.8						54.5	
Approach LOS		A			C						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.0	81.9		34.1		95.9
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	9.5	2.0		25.4		56.6
Green Ext Time (p_c), s	0.0	52.1		2.3		21.9

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1647	27	92	1699	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1647	27	92	1699	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	1810	30	101	1867	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	264	2354	1150	291	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	1810	30	101	1867	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	2354	1150	291	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.13	0.77	0.03	0.35	0.78	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	285	2354	1150	320	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.1	1.3	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.0	0.6	0.4	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	1.2	0.0	4.1	1.3	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		1875			2020			114			179	
Approach Delay, s/veh		1.2			1.4			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	6.3	* 84		* 21	4.4	* 86		* 21
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8
Green Ext Time (p_c), s	0.0	55.3		0.5	0.0	59.2		0.2

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1439	84	31	1479	249	76	28	30	253	27	280
Future Volume (veh/h)	167	1439	84	31	1479	249	76	28	30	253	27	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	1564	91	34	1608	271	83	30	33	275	29	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	298	1843	901	273	1720	841	225	68	75	340	301	255
Arrive On Green	0.13	1.00	1.00	0.07	1.00	1.00	0.05	0.08	0.08	0.12	0.16	0.16
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	814	895	1781	1870	1585
Grp Volume(v), veh/h	182	1564	91	34	1608	271	83	0	63	275	29	304
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1709	1781	1870	1585
Q Serve(g_s), s	6.2	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Cycle Q Clear(g_c), s	6.2	0.0	0.0	1.1	0.0	0.0	5.5	0.0	4.6	16.0	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	298	1843	901	273	1720	841	225	0	143	340	301	255
V/C Ratio(X)	0.61	0.85	0.10	0.12	0.93	0.32	0.37	0.00	0.44	0.81	0.10	1.19
Avail Cap(c_a), veh/h	344	1843	901	297	1720	841	225	0	143	340	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.55	0.55	0.55	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	0.0	0.0	12.2	0.0	0.0	51.6	0.0	56.6	47.6	46.5	54.6
Incr Delay (d2), s/veh	1.5	3.2	0.1	0.1	6.7	0.6	1.0	0.0	4.5	13.6	0.3	118.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.8	0.0	0.4	1.6	0.1	2.6	0.0	2.2	2.0	0.8	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	3.2	0.1	12.3	6.7	0.6	52.6	0.0	61.1	61.2	46.8	173.3
LnGrp LOS	B	A	A	B	A	A	D	A	E	E	D	F
Approach Vol, veh/h		1837			1913			146			608	
Approach Delay, s/veh		3.9			5.9			56.3			116.6	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	14.7	75.3	22.0	18.0
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.3	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	3.1	2.0	7.5	22.9	8.2	2.0	18.0	6.6
Green Ext Time (p_c), s	0.0	41.7	0.0	0.0	0.1	44.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	680	1586	0	0	1119	777	304	0	216	0	0	0
Future Volume (veh/h)	680	1586	0	0	1119	777	304	0	216	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	747	1743	0	0	1230	0	334	0	237			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	624	2382	0	0	1209		590	0	263			
Arrive On Green	0.32	0.73	0.00	0.00	0.75	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	3563	0	1585			
Grp Volume(v), veh/h	747	1743	0	0	1230	0	334	0	237			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	41.5	40.1	0.0	0.0	48.5	0.0	11.2	0.0	19.1			
Cycle Q Clear(g_c), s	41.5	40.1	0.0	0.0	48.5	0.0	11.2	0.0	19.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	624	2382	0	0	1209		590	0	263			
V/C Ratio(X)	1.20	0.73	0.00	0.00	1.02		0.57	0.00	0.90			
Avail Cap(c_a), veh/h	624	2382	0	0	1209		682	0	304			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.16	0.16	0.00	0.00	0.29	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	9.9	0.0	0.0	16.5	0.0	49.9	0.0	53.2			
Incr Delay (d2), s/veh	91.4	0.3	0.0	0.0	18.4	0.0	0.3	0.0	24.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	34.9	11.5	0.0	0.0	8.6	0.0	4.8	0.0	9.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.4	10.2	0.0	0.0	35.0	0.0	50.2	0.0	77.5			
LnGrp LOS	F	B	A	A	F		D	A	E			
Approach Vol, veh/h		2490			1230	A		571				
Approach Delay, s/veh		46.3			35.0			61.6				
Approach LOS		D			C			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		102.4			47.0	55.4		27.6				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		42.1			43.5	50.5		21.1				
Green Ext Time (p_c), s		36.9			0.0	0.0		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	176	432	20	230	26	364	356	16	21	303	399
Future Volume (veh/h)	272	176	432	20	230	26	364	356	16	21	303	399
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	302	196	0	22	256	29	404	396	18	23	337	443
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	356	502		376	313	35	361	567	26	281	454	676
Arrive On Green	0.10	0.27	0.00	0.03	0.19	0.19	0.10	0.32	0.32	0.03	0.25	0.25
Sat Flow, veh/h	3456	1870	1585	1767	1637	185	3456	1775	81	1753	1841	2745
Grp Volume(v), veh/h	302	196	0	22	0	285	404	0	414	23	337	443
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1767	0	1822	1728	0	1856	1753	1841	1373
Q Serve(g_s), s	5.8	5.7	0.0	0.7	0.0	10.1	7.0	0.0	13.1	0.6	11.3	9.7
Cycle Q Clear(g_c), s	5.8	5.7	0.0	0.7	0.0	10.1	7.0	0.0	13.1	0.6	11.3	9.7
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	356	502		376	0	348	361	0	593	281	454	676
V/C Ratio(X)	0.85	0.39		0.06	0.00	0.82	1.12	0.00	0.70	0.08	0.74	0.65
Avail Cap(c_a), veh/h	356	530		486	0	487	361	0	593	383	533	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	20.0	0.0	20.6	0.0	26.0	30.0	0.0	20.0	18.2	23.3	22.7
Incr Delay (d2), s/veh	17.3	0.5	0.0	0.1	0.0	7.5	83.7	0.0	4.6	0.1	6.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	2.3	0.0	0.3	0.0	4.8	6.8	0.0	5.6	0.2	5.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	20.5	0.0	20.6	0.0	33.5	113.7	0.0	24.5	18.4	29.9	25.3
LnGrp LOS	D	C		C	A	C	F	A	C	B	C	C
Approach Vol, veh/h		498	A		307			818			803	
Approach Delay, s/veh		36.5			32.6			68.6			27.0	
Approach LOS		D			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	27.0	7.8	24.1	13.0	22.1	13.0	18.9
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.6	15.1	2.7	7.7	9.0	13.3	7.8	12.1
Green Ext Time (p_c), s	0.0	1.7	0.0	0.7	0.0	3.2	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	43.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	53	21	0	54	16	647	8	25	500	16
Future Vol, veh/h	34	0	53	21	0	54	16	647	8	25	500	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	4	4	0
Mvmt Flow	38	0	59	23	0	60	18	719	9	28	556	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1402	1376	556	1406	1385	719	574	0	0	728	0	0
Stage 1	612	612	-	755	755	-	-	-	-	-	-	-
Stage 2	790	764	-	651	630	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	119	146	534	117	145	428	1009	-	-	866	-	-
Stage 1	484	487	-	401	420	-	-	-	-	-	-	-
Stage 2	386	416	-	457	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	139	534	100	138	428	1009	-	-	866	-	-
Mov Cap-2 Maneuver	98	139	-	100	138	-	-	-	-	-	-	-
Stage 1	475	471	-	394	412	-	-	-	-	-	-	-
Stage 2	326	409	-	393	463	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.3	25.1	0.2	0.4
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1009	-	-	98	534	100	428	866	-	-
HCM Lane V/C Ratio	0.018	-	-	0.385	0.11	0.233	0.14	0.032	-	-
HCM Control Delay (s)	8.6	-	-	63.1	12.6	51.6	14.8	9.3	-	-
HCM Lane LOS	A	-	-	F	B	F	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.4	0.8	0.5	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	13	4	148	18	280	6	176	56	169	538	45
Future Volume (veh/h)	33	13	4	148	18	280	6	176	56	169	538	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	14	4	164	20	311	7	196	62	188	598	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	166	312	89	334	34	354	483	1074	910	758	1287	1090
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.57	0.57	0.57	0.06	0.68	0.68
Sat Flow, veh/h	1066	1421	406	1253	153	1610	796	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	37	0	18	184	0	311	7	196	62	188	598	50
Grp Sat Flow(s),veh/h/ln	1066	0	1827	1406	0	1610	796	1900	1610	1810	1900	1610
Q Serve(g_s), s	3.8	0.0	0.9	13.3	0.0	21.8	0.5	5.8	2.0	4.8	17.3	1.2
Cycle Q Clear(g_c), s	18.0	0.0	0.9	14.2	0.0	21.8	4.7	5.8	2.0	4.8	17.3	1.2
Prop In Lane	1.00		0.22	0.89		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	0	402	367	0	354	483	1074	910	758	1287	1090
V/C Ratio(X)	0.22	0.00	0.04	0.50	0.00	0.88	0.01	0.18	0.07	0.25	0.46	0.05
Avail Cap(c_a), veh/h	288	0	611	534	0	538	483	1074	910	850	1287	1090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	35.8	41.4	0.0	44.0	13.1	12.3	11.5	8.6	8.9	6.3
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.1	0.0	10.4	0.1	0.4	0.1	0.2	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.4	4.8	0.0	9.6	0.1	2.4	0.7	1.9	7.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	0.0	35.9	42.5	0.0	54.4	13.1	12.7	11.6	8.8	10.1	6.3
LnGrp LOS	D	A	D	D	A	D	B	B	B	A	B	A
Approach Vol, veh/h		55			495			265			836	
Approach Delay, s/veh		45.2			50.0			12.4			9.6	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.1	71.9		31.6		85.0		31.6				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	13.0	60.0		39.0		79.0		39.0				
Max Q Clear Time (g_c+I1), s	6.8	7.8		20.0		19.3		23.8				
Green Ext Time (p_c), s	0.3	1.3		0.2		5.2		1.9				

Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	578	0	88	657	248	0	106	24	102	141	79
Future Volume (veh/h)	164	578	0	88	657	248	0	106	24	102	141	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	182	642	0	98	730	276	0	118	27	113	157	88
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	326	1080	0	334	945	422	0	427	362	443	718	608
Arrive On Green	0.10	0.30	0.00	0.06	0.26	0.26	0.00	0.22	0.22	0.07	0.38	0.38
Sat Flow, veh/h	1810	3705	0	1810	3610	1610	0	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	182	642	0	98	730	276	0	118	27	113	157	88
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	1805	1610	0	1900	1610	1810	1900	1610
Q Serve(g_s), s	4.9	10.4	0.0	2.7	12.9	10.5	0.0	3.5	0.9	3.1	3.9	2.5
Cycle Q Clear(g_c), s	4.9	10.4	0.0	2.7	12.9	10.5	0.0	3.5	0.9	3.1	3.9	2.5
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	1080	0	334	945	422	0	427	362	443	718	608
V/C Ratio(X)	0.56	0.59	0.00	0.29	0.77	0.65	0.00	0.28	0.07	0.26	0.22	0.14
Avail Cap(c_a), veh/h	384	1312	0	380	1154	515	0	427	362	481	718	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	20.6	0.0	17.2	23.5	22.6	0.0	22.1	21.0	17.2	14.5	14.1
Incr Delay (d2), s/veh	1.5	0.5	0.0	0.5	2.7	2.2	0.0	0.3	0.1	0.3	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.9	0.0	1.0	5.2	3.8	0.0	1.4	0.3	1.2	1.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	21.1	0.0	17.7	26.2	24.8	0.0	22.4	21.1	17.5	15.2	14.6
LnGrp LOS	B	C	A	B	C	C	A	C	C	B	B	B
Approach Vol, veh/h		824			1104			145			358	
Approach Delay, s/veh		20.6			25.1			22.2			15.8	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	10.5	21.5	10.2	26.6		32.0	12.8	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	6.3	14.0	6.0	25.0		26.0	9.0	22.0
Max Q Clear Time (g_c+I1), s	5.1	5.5	4.7	12.4		5.9	6.9	14.9
Green Ext Time (p_c), s	0.0	0.3	0.0	3.2		1.0	0.1	3.1

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	105	27	0	4	34	610	10	2	552	23
Future Vol, veh/h	61	0	105	27	0	4	34	610	10	2	552	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	0	117	30	0	4	38	678	11	2	613	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1379	1382	613	1443	1397	678	639	0	0	689	0	0
Stage 1	617	617	-	754	754	-	-	-	-	-	-	-
Stage 2	762	765	-	689	643	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	123	145	496	111	142	456	955	-	-	915	-	-
Stage 1	481	484	-	404	420	-	-	-	-	-	-	-
Stage 2	400	415	-	439	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	118	139	496	82	136	456	955	-	-	915	-	-
Mov Cap-2 Maneuver	118	139	-	82	136	-	-	-	-	-	-	-
Stage 1	462	483	-	388	403	-	-	-	-	-	-	-
Stage 2	380	398	-	335	471	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35	64.6	0.5	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	955	-	-	118	496	82	456	915	-	-
HCM Lane V/C Ratio	0.04	-	-	0.574	0.235	0.366	0.01	0.002	-	-
HCM Control Delay (s)	8.9	-	-	70.3	14.5	72.3	13	8.9	0	-
HCM Lane LOS	A	-	-	F	B	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.8	0.9	1.4	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	844	787	25	1324	53	470	11	20	12	95
Future Volume (vph)	76	844	787	25	1324	53	470	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	3	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.0	14.0	14.0
Total Split (s)	12.0	78.0	78.0	12.0	78.0	78.0	24.0	40.0	16.0	16.0	16.0
Total Split (%)	9.2%	60.0%	60.0%	9.2%	60.0%	60.0%	18.5%	30.8%	12.3%	12.3%	12.3%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	84.2	77.8	77.8	79.6	72.4	72.4	18.0	28.3	8.6	8.6	8.6
Actuated g/C Ratio	0.65	0.60	0.60	0.61	0.56	0.56	0.14	0.22	0.07	0.07	0.07
v/c Ratio	0.32	0.36	0.65	0.07	0.61	0.06	0.72	0.10	0.24	0.11	0.45
Control Delay	11.5	14.6	8.2	4.7	6.8	0.2	59.5	17.6	63.8	58.6	12.0
Queue Delay	0.0	0.0	0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	11.5	14.6	8.3	4.7	7.9	0.2	59.5	17.6	63.8	58.6	12.4
LOS	B	B	A	A	A	A	E	B	E	E	B
Approach Delay		11.6			7.5			56.5		25.0	
Approach LOS		B			A			E		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 75.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	80	888	828	26	1394	56	495	38	21	13	100
v/c Ratio	0.32	0.36	0.65	0.07	0.61	0.06	0.72	0.10	0.24	0.11	0.45
Control Delay	11.5	14.6	8.2	4.7	6.8	0.2	59.5	17.6	63.8	58.6	12.0
Queue Delay	0.0	0.0	0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	11.5	14.6	8.3	4.7	7.9	0.2	59.5	17.6	63.8	58.6	12.4
Queue Length 50th (ft)	23	104	97	1	35	0	143	8	17	11	0
Queue Length 95th (ft)	43	291	465	m7	115	m1	178	35	45	32	36
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	254	2496	1285	401	2345	955	732	463	105	144	237
Starvation Cap Reductn	0	0	51	0	167	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	645	0	0	0	0	0	19
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.36	0.67	0.06	0.82	0.06	0.68	0.08	0.20	0.09	0.46

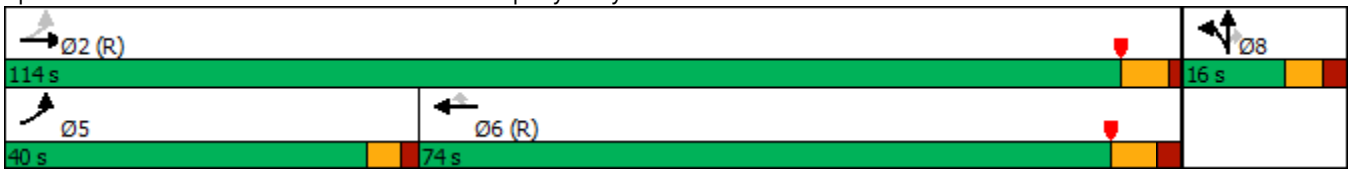
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	552	1561	1539	387	0	152
Future Volume (vph)	552	1561	1539	387	0	152
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	110.0	109.0	67.0	67.0	8.9	8.9
Actuated g/C Ratio	0.85	0.84	0.52	0.52	0.07	0.07
v/c Ratio	1.10	0.49	1.13	0.44	0.39	0.54
Control Delay	90.6	7.0	94.7	6.5	67.3	23.5
Queue Delay	0.0	0.0	0.3	0.5	0.7	0.0
Total Delay	90.6	7.1	95.1	7.0	68.0	23.5
LOS	F	A	F	A	E	C
Approach Delay		28.9	77.3		33.4	
Approach LOS		C	E		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 51.1	Intersection LOS: D
Intersection Capacity Utilization 94.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	600	1697	1673	421	47	165
v/c Ratio	1.10	0.49	1.13	0.44	0.39	0.54
Control Delay	90.6	7.0	94.7	6.5	67.3	23.5
Queue Delay	0.0	0.0	0.3	0.5	0.7	0.0
Total Delay	90.6	7.1	95.1	7.0	68.0	23.5
Queue Length 50th (ft)	~519	188	~881	65	39	18
Queue Length 95th (ft)	m#753	316	#1030	84	80	57
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	547	3451	1476	961	134	328
Starvation Cap Reductn	0	0	120	221	0	0
Spillback Cap Reductn	0	59	24	0	14	1
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.50	1.23	0.57	0.39	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

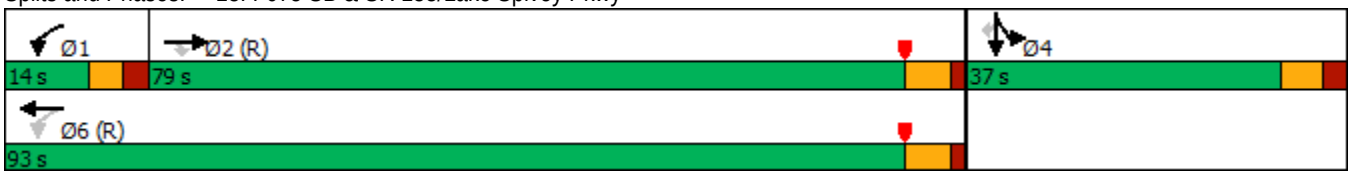
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

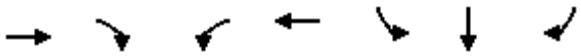
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1760	74	244	1345	369	0	536
Future Volume (vph)	1760	74	244	1345	369	0	536
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	71.8	71.8	87.4	87.4	30.2	30.2	30.2
Actuated g/C Ratio	0.55	0.55	0.67	0.67	0.23	0.23	0.23
v/c Ratio	0.85	0.09	1.40	0.77	0.52	0.52	0.91
Control Delay	19.4	3.3	223.4	4.9	48.9	49.0	68.1
Queue Delay	0.3	0.0	0.0	1.5	0.0	0.0	0.0
Total Delay	19.8	3.3	223.4	6.4	48.9	49.0	68.1
LOS	B	A	F	A	D	D	E
Approach Delay	19.1			39.7		60.3	
Approach LOS	B			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay: 35.3	Intersection LOS: D
Intersection Capacity Utilization 94.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1934	81	268	1478	202	203	589
v/c Ratio	0.85	0.09	1.40	0.77	0.52	0.52	0.91
Control Delay	19.4	3.3	223.4	4.9	48.9	49.0	68.1
Queue Delay	0.3	0.0	0.0	1.5	0.0	0.0	0.0
Total Delay	19.8	3.3	223.4	6.4	48.9	49.0	68.1
Queue Length 50th (ft)	300	4	~264	3	156	157	275
Queue Length 95th (ft)	335	m7	m#219	m2	243	243	#389
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2315	925	191	1931	397	397	658
Starvation Cap Reductn	77	0	0	266	0	0	0
Spillback Cap Reductn	0	0	0	241	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.09	1.40	0.89	0.51	0.51	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

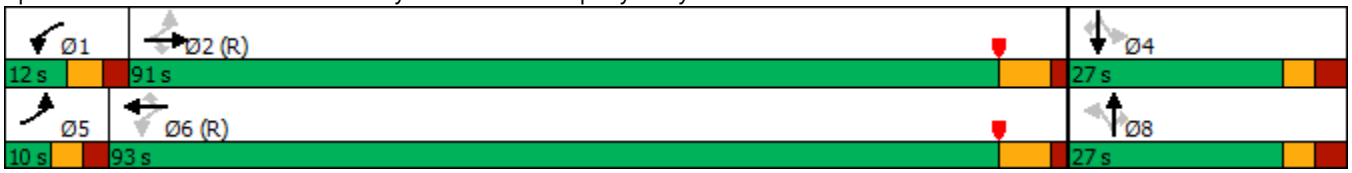
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

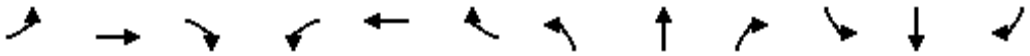
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1647	27	92	1699	47	22	3	79	91	9	63
Future Volume (vph)	32	1647	27	92	1699	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	95.0	88.9	88.9	100.4	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.73	0.68	0.68	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.22	0.83	0.03	0.56	0.80	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	4.5	9.5	0.1	20.5	14.7	1.2	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	9.5	0.1	20.5	15.3	1.2	51.4	47.7	15.9	69.3	48.6	10.5
LOS	A	A	A	C	B	A	D	D	B	E	D	B
Approach Delay		9.3			15.2			24.2			45.5	
Approach LOS		A			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	1810	30	101	1867	52	24	3	87	100	10	69
v/c Ratio	0.22	0.83	0.03	0.56	0.80	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	4.5	9.5	0.1	20.5	14.7	1.2	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	9.5	0.1	20.5	15.3	1.2	51.4	47.7	15.9	69.3	48.6	10.5
Queue Length 50th (ft)	2	176	0	14	674	0	18	2	5	81	8	0
Queue Length 95th (ft)	m7	243	m0	m32	924	m1	44	12	53	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	160	2184	1106	181	2339	1179	221	295	318	223	295	318
Starvation Cap Reductn	0	0	0	0	172	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.83	0.03	0.56	0.86	0.04	0.11	0.01	0.27	0.45	0.03	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	167	1439	84	31	1479	249	76	28	253	27	280
Future Volume (vph)	167	1439	84	31	1479	249	76	28	253	27	280
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	87.0	79.9	79.9	76.0	69.0	69.0	14.8	9.5	30.7	17.6	17.6
Actuated g/C Ratio	0.67	0.61	0.61	0.58	0.53	0.53	0.11	0.07	0.24	0.14	0.14
v/c Ratio	0.84	0.80	0.09	0.20	0.95	0.29	0.48	0.40	0.88	0.12	0.83
Control Delay	62.9	16.0	0.2	10.9	29.4	4.5	51.1	39.1	73.5	48.3	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	16.0	0.2	10.9	29.4	4.5	51.1	39.1	73.5	48.3	40.8
LOS	E	B	A	B	C	A	D	D	E	D	D
Approach Delay		19.8			25.6			45.9		56.0	
Approach LOS		B			C			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 87.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	182	1564	91	34	1608	271	83	63	275	29	304
v/c Ratio	0.84	0.80	0.09	0.20	0.95	0.29	0.48	0.40	0.88	0.12	0.83
Control Delay	62.9	16.0	0.2	10.9	29.4	4.5	51.1	39.1	73.5	48.3	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	16.0	0.2	10.9	29.4	4.5	51.1	39.1	73.5	48.3	40.8
Queue Length 50th (ft)	90	702	0	5	398	10	55	24	206	21	104
Queue Length 95th (ft)	m#208	603	m0	m15	#870	m59	100	71	#284	51	#222
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	223	1963	1042	172	1695	949	174	174	312	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.80	0.09	0.20	0.95	0.29	0.48	0.36	0.88	0.10	0.75

Intersection Summary

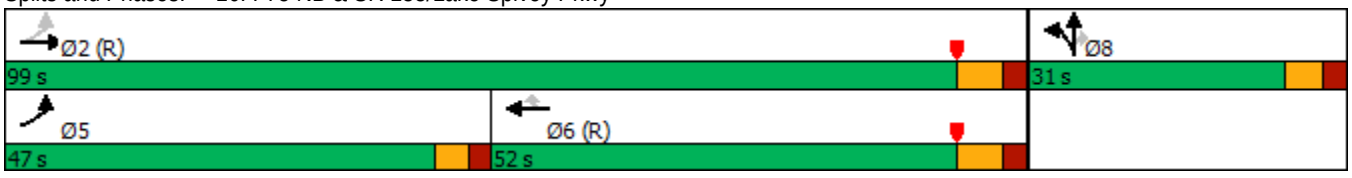
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	680	1586	1119	777	304	0	216
Future Volume (vph)	680	1586	1119	777	304	0	216
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	100.5	99.1	45.1	45.1	17.9	17.9	17.9
Actuated g/C Ratio	0.77	0.76	0.35	0.35	0.14	0.14	0.14
v/c Ratio	1.04	0.72	1.11	1.01	0.72	0.72	0.83
Control Delay	61.9	15.7	90.8	40.2	70.4	70.4	58.8
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	17.3	90.8	40.2	70.4	70.4	58.8
LOS	E	B	F	D	E	E	E
Approach Delay		30.7	70.1			65.6	
Approach LOS		C	E			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 109.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	747	1743	1230	854	167	167	237
v/c Ratio	1.04	0.72	1.11	1.01	0.72	0.72	0.83
Control Delay	61.9	15.7	90.8	40.2	70.4	70.4	58.8
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	17.3	90.8	40.2	70.4	70.4	58.8
Queue Length 50th (ft)	~636	538	~613	~200	143	143	133
Queue Length 95th (ft)	m#727	m588	m#693	m#279	213	213	217
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	718	2435	1108	842	321	321	367
Starvation Cap Reductn	0	477	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.89	1.11	1.01	0.52	0.52	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

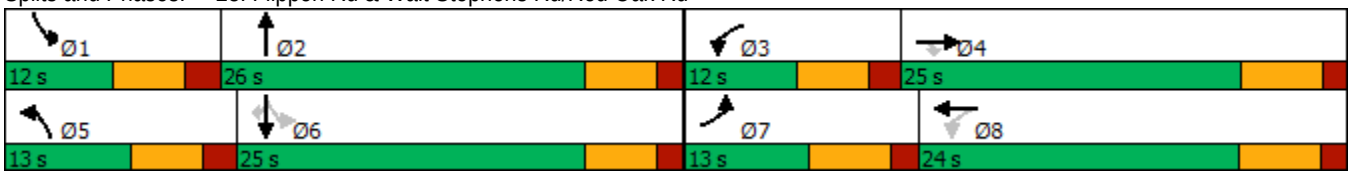
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

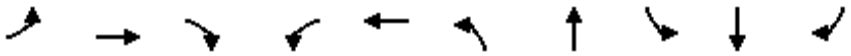
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	272	176	432	20	230	364	356	21	303	399
Future Volume (vph)	272	176	432	20	230	364	356	21	303	399
Turn Type	Prot	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			4	8				6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	13.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	17.3%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	6.9	23.5	23.5	21.3	14.9	7.0	26.2	23.2	17.6	17.6
Actuated g/C Ratio	0.10	0.33	0.33	0.30	0.21	0.10	0.37	0.33	0.25	0.25
v/c Ratio	0.89	0.32	0.57	0.05	0.73	1.18	0.60	0.07	0.74	0.44
Control Delay	63.7	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	4.0
LOS	E	C	A	B	D	F	C	B	D	A
Approach Delay		26.7			35.9		81.6		17.7	
Approach LOS		C			D		F		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 70.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 40.7	Intersection LOS: D
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	302	196	480	22	285	404	414	23	337	443
v/c Ratio	0.89	0.32	0.57	0.05	0.73	1.18	0.60	0.07	0.74	0.44
Control Delay	63.7	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	21.6	5.6	13.8	37.6	138.9	25.8	13.3	36.0	4.0
Queue Length 50th (ft)	71	58	0	6	117	~119	129	6	138	0
Queue Length 95th (ft)	#148	134	71	19	196	#208	#325	19	#251	35
Internal Link Dist (ft)		1906			3175		1869		1364	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	338	622	848	407	470	343	689	325	506	1078
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.32	0.57	0.05	0.61	1.18	0.60	0.07	0.67	0.41

Intersection Summary

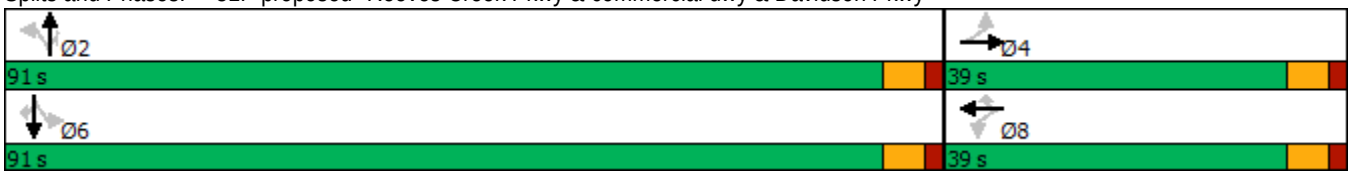
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

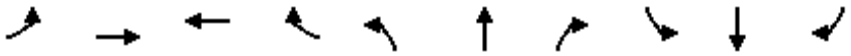
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	33	13	148	18	280	6	176	56	169	538	45
Future Volume (vph)	33	13	148	18	280	6	176	56	169	538	45
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8			2			6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	4	4	8	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	91.0	91.0	91.0	91.0	91.0	91.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	21.1	21.1		21.1	21.1	85.3	85.3	85.3	85.3	85.3	85.3
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.72	0.72	0.72	0.72	0.72	0.72
v/c Ratio	0.23	0.05		0.74	0.57	0.01	0.14	0.05	0.22	0.44	0.04
Control Delay	43.9	32.6		63.7	8.7	6.7	6.4	1.8	7.2	8.9	2.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	32.6		63.7	8.7	6.7	6.4	1.8	7.2	8.9	2.0
LOS	D	C		E	A	A	A	A	A	A	A
Approach Delay		40.2		29.2			5.3			8.1	
Approach LOS		D		C			A			A	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 118.4	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





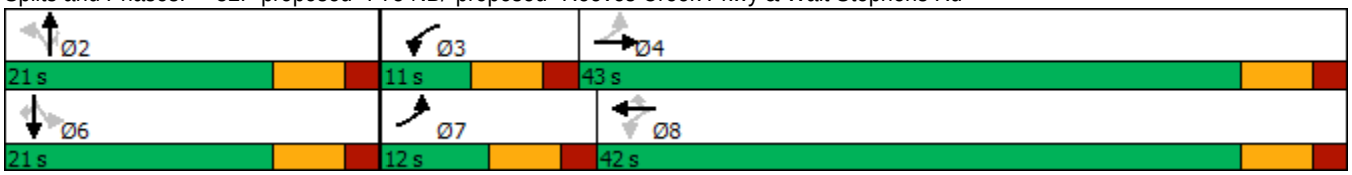
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	37	18	184	311	7	196	62	188	598	50
v/c Ratio	0.23	0.05	0.74	0.57	0.01	0.14	0.05	0.22	0.44	0.04
Control Delay	43.9	32.6	63.7	8.7	6.7	6.4	1.8	7.2	8.9	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	32.6	63.7	8.7	6.7	6.4	1.8	7.2	8.9	2.0
Queue Length 50th (ft)	24	9	134	0	1	40	0	41	161	0
Queue Length 95th (ft)	56	30	214	74	7	89	15	94	312	14
Internal Link Dist (ft)		448	896			799			1580	
Turn Bay Length (ft)										
Base Capacity (vph)	258	516	390	675	527	1367	1180	867	1367	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.03	0.47	0.46	0.01	0.14	0.05	0.22	0.44	0.04

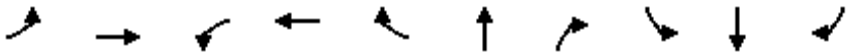
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	164	578	88	657	248	106	24	102	141	79
Future Volume (vph)	164	578	88	657	248	106	24	102	141	79
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	3	8		2			6	
Permitted Phases	4		8		8		2	6		6
Detector Phase	7	4	3	8	8	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	43.0	11.0	42.0	42.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	16.0%	57.3%	14.7%	56.0%	56.0%	28.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	Min	Min	Max	Max	Max
Act Effct Green (s)	39.5	34.9	36.4	31.3	31.3	15.1	15.1	15.1	15.1	15.1
Actuated g/C Ratio	0.56	0.49	0.52	0.44	0.44	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.66	0.68	0.28	0.87	0.32	0.29	0.06	0.41	0.39	0.20
Control Delay	22.0	18.9	7.8	30.0	2.7	27.3	0.2	31.0	28.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	18.9	7.8	30.0	2.7	27.3	0.2	31.0	28.7	3.3
LOS	C	B	A	C	A	C	A	C	C	A
Approach Delay		19.6		21.2		22.3			23.2	
Approach LOS		B		C		C			C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 70.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 32: *proposed* I-75 NB/*proposed* Reeves Creek Pkwy & Walt Stephens Rd



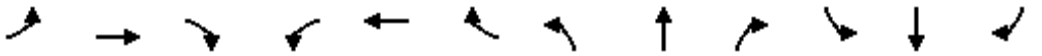


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	182	642	98	730	276	118	27	113	157	88
v/c Ratio	0.66	0.68	0.28	0.87	0.32	0.29	0.06	0.41	0.39	0.20
Control Delay	22.0	18.9	7.8	30.0	2.7	27.3	0.2	31.0	28.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	18.9	7.8	30.0	2.7	27.3	0.2	31.0	28.7	3.3
Queue Length 50th (ft)	30	216	15	272	0	47	0	46	63	0
Queue Length 95th (ft)	#100	333	31	#442	36	92	0	94	118	17
Internal Link Dist (ft)		4380		1906		690			1068	
Turn Bay Length (ft)										
Base Capacity (vph)	275	1003	349	975	963	406	448	276	406	448
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.64	0.28	0.75	0.29	0.29	0.06	0.41	0.39	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Reeves Creek (Stockbridge, GA) DRI #TBD 2029 Phase 1 Future with Project with NB Interchange PM 11: Davidson Pkwy & SR 138/Stockbridge Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1885	871	57	1215	61	663	28	93	70	27	188
Future Volume (veh/h)	165	1885	871	57	1215	61	663	28	93	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	1964	0	59	1266	64	691	29	97	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	267	2395		141	2317	888	752	109	365	173	197	167
Arrive On Green	0.05	0.58	0.00	0.02	0.38	0.38	0.15	0.29	0.29	0.11	0.11	0.11
Sat Flow, veh/h	1781	4135	1585	1781	4135	1585	5023	378	1265	1265	1870	1585
Grp Volume(v), veh/h	172	1964	0	59	1266	64	691	0	126	73	28	196
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1781	1378	1585	1674	0	1643	1265	1870	1585
Q Serve(g_s), s	7.4	68.5	0.0	2.5	43.3	4.7	24.4	0.0	10.6	9.9	2.4	19.0
Cycle Q Clear(g_c), s	7.4	68.5	0.0	2.5	43.3	4.7	24.4	0.0	10.6	9.9	2.4	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	267	2395		141	2317	888	752	0	474	173	197	167
V/C Ratio(X)	0.64	0.82		0.42	0.55	0.07	0.92	0.00	0.27	0.42	0.14	1.17
Avail Cap(c_a), veh/h	330	2395		149	2317	888	781	0	481	173	197	167
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	30.3	0.0	31.9	38.2	26.2	75.5	0.0	49.3	76.4	73.1	80.5
Incr Delay (d2), s/veh	1.5	1.6	0.0	1.6	0.4	0.1	15.6	0.0	0.3	1.6	0.3	123.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	22.1	0.0	1.2	15.4	1.8	11.7	0.0	4.5	3.3	1.2	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	32.0	0.0	33.5	38.6	26.2	91.0	0.0	49.6	78.0	73.4	203.7
LnGrp LOS	C	C		C	D	C	F	A	D	E	E	F
Approach Vol, veh/h		2136	A		1389			817			297	
Approach Delay, s/veh		31.4			37.8			84.6			160.5	
Approach LOS		C			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	110.6	32.9	25.3	14.6	107.1		58.2				
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 1E2	28.0	* 19	16.0	* 94		* 53				
Max Q Clear Time (g_c+I1), s	4.5	70.5	26.4	21.0	9.4	45.3		12.6				
Green Ext Time (p_c), s	0.0	27.4	0.5	0.0	0.2	24.1		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	2740	0	0	1774	341	59	0	197	0	0	0
Future Volume (veh/h)	436	2740	0	0	1774	341	59	0	197	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	454	2854	0	0	1848	355	61	0	205			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	396	3476	0	0	1764	971	154	0	242			
Arrive On Green	0.40	1.00	0.00	0.00	0.61	0.61	0.09	0.00	0.09			
Sat Flow, veh/h	1781	4271	0	0	2954	1585	1781	0	2790			
Grp Volume(v), veh/h	454	2854	0	0	1848	355	61	0	205			
Grp Sat Flow(s),veh/h/ln	1781	1378	0	0	1439	1585	1781	0	1395			
Q Serve(g_s), s	36.0	0.0	0.0	0.0	110.3	20.1	5.8	0.0	13.0			
Cycle Q Clear(g_c), s	36.0	0.0	0.0	0.0	110.3	20.1	5.8	0.0	13.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	396	3476	0	0	1764	971	154	0	242			
V/C Ratio(X)	1.15	0.82	0.00	0.00	1.05	0.37	0.40	0.00	0.85			
Avail Cap(c_a), veh/h	396	3476	0	0	1764	971	217	0	339			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.16	0.16	0.00	0.00	0.67	0.67	1.00	0.00	1.00			
Uniform Delay (d), s/veh	49.0	0.0	0.0	0.0	34.8	17.4	77.7	0.0	81.0			
Incr Delay (d2), s/veh	70.9	0.4	0.0	0.0	31.7	0.7	1.6	0.0	13.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	22.5	0.1	0.0	0.0	43.7	7.4	2.7	0.0	5.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.8	0.4	0.0	0.0	66.5	18.1	79.4	0.0	94.3			
LnGrp LOS	F	A	A	A	F	B	E	A	F			
Approach Vol, veh/h		3308			2203			266				
Approach Delay, s/veh		16.8			58.7			90.9				
Approach LOS		B			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		158.3			41.0	117.3		21.7				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			38.0	112.3		15.0				
Green Ext Time (p_c), s		132.4			0.0	0.0		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2512	71	271	1560	0	0	0	0	687	0	706
Future Volume (veh/h)	0	2512	71	271	1560	0	0	0	0	687	0	706
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2590	73	279	1608	0				708	0	728
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	2690	835	173	2064	0				762	0	678
Arrive On Green	0.00	1.00	1.00	0.07	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4271	1284	1781	2954	0				3563	0	3170
Grp Volume(v), veh/h	0	2590	73	279	1608	0				708	0	728
Grp Sat Flow(s),veh/h/ln	0	1378	1284	1781	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	0.0				35.1	0.0	38.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	0.0				35.1	0.0	38.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2690	835	173	2064	0				762	0	678
V/C Ratio(X)	0.00	0.96	0.09	1.61	0.78	0.00				0.93	0.00	1.07
Avail Cap(c_a), veh/h	0	2690	835	173	2064	0				762	0	678
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	23.9	0.0	0.0				69.4	0.0	70.8
Incr Delay (d2), s/veh	0.0	1.4	0.0	278.6	0.3	0.0				17.8	0.0	56.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	17.6	0.1	0.0				17.7	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.4	0.0	302.5	0.3	0.0				87.2	0.0	126.8
LnGrp LOS	A	A	A	F	A	A				F	A	F
Approach Vol, veh/h		2663			1887						1436	
Approach Delay, s/veh		1.4			45.0						107.3	
Approach LOS		A			D						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.0	123.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	6.1	117.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	8.1	2.0		40.5		2.0
Green Ext Time (p_c), s	0.0	102.0		0.0		55.7

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	2228	47	197	1898	95	65	23	197	85	17	46
Future Volume (veh/h)	45	2228	47	197	1898	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2321	49	205	1977	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	217	2318	1133	176	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.06	0.99	0.99	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2321	49	205	1977	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.3	128.6	0.0	8.5	6.2	0.1	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.3	128.6	0.0	8.5	6.2	0.1	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	2318	1133	176	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.22	1.00	0.04	1.17	0.82	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	235	2318	1133	319	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	0.0	0.0	51.2	0.3	0.2	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.0	5.9	0.0	80.7	0.9	0.0	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	0.0	11.9	0.7	0.1	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.4	5.9	0.0	131.9	1.2	0.3	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	F	A	F	A	A	E	E	F	E	E	E
Approach Vol, veh/h		2417			2281			297			155	
Approach Delay, s/veh		5.8			12.9			116.6			75.1	
Approach LOS		A			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.6	134.4		30.0	9.2	140.8		30.0
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	23.6	* 1.1E2		* 24	5.4	* 1.3E2		* 24
Max Q Clear Time (g_c+I1), s	10.5	130.6		17.3	3.3	8.2		25.2
Green Ext Time (p_c), s	0.2	0.0		0.4	0.0	85.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1814	168	47	1514	382	148	87	40	391	79	211
Future Volume (veh/h)	212	1814	168	47	1514	382	148	87	40	391	79	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	1930	179	50	1611	406	157	93	43	416	84	224
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	215	1794	876	187	1560	762	283	107	50	393	363	308
Arrive On Green	0.20	1.00	1.00	0.06	0.96	0.96	0.08	0.09	0.09	0.19	0.19	0.19
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1781	1210	560	1781	1870	1585
Grp Volume(v), veh/h	226	1930	179	50	1611	406	157	0	136	416	84	224
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	17.7	0.0	0.0	2.5	86.5	3.6	14.4	0.0	13.7	34.0	6.8	23.9
Cycle Q Clear(g_c), s	17.7	0.0	0.0	2.5	86.5	3.6	14.4	0.0	13.7	34.0	6.8	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	215	1794	876	187	1560	762	283	0	157	393	363	308
V/C Ratio(X)	1.05	1.08	0.20	0.27	1.03	0.53	0.55	0.00	0.87	1.06	0.23	0.73
Avail Cap(c_a), veh/h	215	1794	876	193	1560	762	283	0	186	393	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	0.55	0.55	0.55	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	0.0	0.0	21.4	3.5	1.9	67.7	0.0	81.0	60.0	61.2	68.0
Incr Delay (d2), s/veh	47.6	38.0	0.2	0.4	26.1	1.5	2.3	0.0	33.9	62.1	0.7	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	9.5	0.0	1.1	7.0	1.0	6.8	0.0	7.8	23.0	3.3	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.5	38.0	0.2	21.8	29.6	3.3	70.0	0.0	114.9	122.1	61.9	77.4
LnGrp LOS	F	F	A	C	F	A	E	A	F	F	E	E
Approach Vol, veh/h		2335			2067			293			724	
Approach Delay, s/veh		41.6			24.3			90.8			101.3	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	105.9	21.0	42.1	24.0	92.9	40.0	23.1
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.5	2.0	16.4	25.9	19.7	88.5	36.0	15.7
Green Ext Time (p_c), s	0.0	69.8	0.0	1.8	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	45.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	2202	0	0	1448	535	233	0	169	0	0	0
Future Volume (veh/h)	284	2202	0	0	1448	535	233	0	169	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	309	2393	0	0	1574	0	253	0	184			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	384	2591	0	0	2284		460	0	205			
Arrive On Green	0.09	1.00	0.00	0.00	1.00	0.00	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3329	0	0	3329	1585	3563	0	1585			
Grp Volume(v), veh/h	309	2393	0	0	1574	0	253	0	184			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1622	1585	1781	0	1585			
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	0.0	12.0	0.0	20.6			
Cycle Q Clear(g_c), s	8.8	0.0	0.0	0.0	0.0	0.0	12.0	0.0	20.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	384	2591	0	0	2284		460	0	205			
V/C Ratio(X)	0.81	0.92	0.00	0.00	0.69		0.55	0.00	0.90			
Avail Cap(c_a), veh/h	551	2591	0	0	2284		730	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.14	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	5.4	0.0	0.0	0.0	0.0	0.0	73.5	0.0	77.2			
Incr Delay (d2), s/veh	0.5	0.7	0.0	0.0	0.2	0.0	0.4	0.0	12.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.8	0.3	0.0	0.0	0.1	0.0	5.4	0.0	8.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.9	0.7	0.0	0.0	0.2	0.0	73.9	0.0	89.7			
LnGrp LOS	A	A	A	A	A		E	A	F			
Approach Vol, veh/h		2702			1574	A		437				
Approach Delay, s/veh		1.3			0.2			80.5				
Approach LOS		A			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		150.7			17.1	133.6		29.3				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			10.8	2.0		22.6				
Green Ext Time (p_c), s		109.3			0.8	46.6		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	399	342	626	43	188	33	442	404	35	54	572	373
Future Volume (veh/h)	399	342	626	43	188	33	442	404	35	54	572	373
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	429	368	0	46	202	35	475	434	38	58	615	401
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	341	390		162	240	42	499	735	64	393	641	956
Arrive On Green	0.10	0.21	0.00	0.05	0.15	0.15	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	3483	1885	1598	1795	1565	271	3456	1695	148	1795	1885	2812
Grp Volume(v), veh/h	429	368	0	46	0	237	475	0	472	58	615	401
Grp Sat Flow(s),veh/h/ln	1742	1885	1598	1795	0	1836	1728	0	1844	1795	1885	1406
Q Serve(g_s), s	8.8	17.3	0.0	0.0	0.0	11.3	12.3	0.0	17.5	1.8	28.8	6.5
Cycle Q Clear(g_c), s	8.8	17.3	0.0	0.0	0.0	11.3	12.3	0.0	17.5	1.8	28.8	6.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	341	390		162	0	281	499	0	799	393	641	956
V/C Ratio(X)	1.26	0.94		0.28	0.00	0.84	0.95	0.00	0.59	0.15	0.96	0.42
Avail Cap(c_a), veh/h	341	390		204	0	365	499	0	799	421	641	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	1.00	0.00	1.00	0.30	0.00	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	35.2	0.0	41.0	0.0	37.1	38.2	0.0	19.4	17.7	29.1	9.8
Incr Delay (d2), s/veh	128.7	21.6	0.0	1.0	0.0	13.0	12.5	0.0	1.0	0.2	26.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	9.8	0.0	1.0	0.0	5.9	5.8	0.0	6.9	0.7	16.6	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	169.3	56.8	0.0	41.9	0.0	50.1	50.7	0.0	20.4	17.9	56.0	11.2
LnGrp LOS	F	E		D	A	D	D	A	C	B	E	B
Approach Vol, veh/h		797	A		283			947			1074	
Approach Delay, s/veh		117.4			48.8			35.6			37.2	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	44.6	10.2	24.6	19.0	36.2	14.9	19.9
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.6	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	13.8	19.5	2.0	19.3	14.3	30.8	10.8	13.3
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

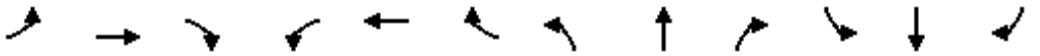
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	28	14	0	40	31	704	17	44	938	28
Future Vol, veh/h	20	0	28	14	0	40	31	704	17	44	938	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	1	1	0
Mvmt Flow	22	0	31	16	0	44	34	782	19	49	1042	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2022	2009	1042	2021	2021	782	1073	0	0	801	0	0
Stage 1	1140	1140	-	850	850	-	-	-	-	-	-	-
Stage 2	882	869	-	1171	1171	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	44	60	281	43	59	394	657	-	-	827	-	-
Stage 1	247	278	-	355	380	-	-	-	-	-	-	-
Stage 2	344	372	-	235	269	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	36	54	281	35	53	394	657	-	-	827	-	-
Mov Cap-2 Maneuver	36	54	-	35	53	-	-	-	-	-	-	-
Stage 1	234	262	-	337	360	-	-	-	-	-	-	-
Stage 2	289	353	-	197	253	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	97.4	56.2	0.4	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	657	-	-	36	281	35	394	827	-	-
HCM Lane V/C Ratio	0.052	-	-	0.617	0.111	0.444	0.113	0.059	-	-
HCM Control Delay (s)	10.8	-	-	206.5	19.4	173.1	15.3	9.6	-	-
HCM Lane LOS	B	-	-	F	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.2	0.4	1.5	0.4	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	17	6	166	23	260	8	388	212	377	419	56
Future Volume (veh/h)	43	17	6	166	23	260	8	388	212	377	419	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	19	7	184	26	289	9	431	236	419	466	62
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	105	271	100	287	35	330	556	1096	929	597	1374	1165
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.58	0.58	0.58	0.11	0.72	0.72
Sat Flow, veh/h	1081	1324	488	1201	170	1610	889	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	48	0	26	210	0	289	9	431	236	419	466	62
Grp Sat Flow(s),veh/h/ln	1081	0	1812	1371	0	1610	889	1900	1610	1810	1900	1610
Q Serve(g_s), s	7.3	0.0	1.9	22.8	0.0	29.1	0.7	20.8	12.2	15.2	15.0	1.9
Cycle Q Clear(g_c), s	32.1	0.0	1.9	24.7	0.0	29.1	0.7	20.8	12.2	15.2	15.0	1.9
Prop In Lane	1.00		0.27	0.88		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	371	321	0	330	556	1096	929	597	1374	1165
V/C Ratio(X)	0.46	0.00	0.07	0.65	0.00	0.88	0.02	0.39	0.25	0.70	0.34	0.05
Avail Cap(c_a), veh/h	187	0	509	432	0	452	556	1096	929	884	1374	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.8	0.0	53.6	63.6	0.0	64.4	15.1	19.4	17.6	13.2	8.5	6.7
Incr Delay (d2), s/veh	3.1	0.0	0.1	2.2	0.0	13.5	0.1	1.1	0.7	1.5	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.9	8.6	0.0	13.1	0.2	9.3	4.6	6.4	6.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	0.0	53.7	65.9	0.0	77.9	15.2	20.4	18.2	14.7	9.2	6.7
LnGrp LOS	F	A	D	E	A	E	B	C	B	B	A	A
Approach Vol, veh/h		74			499			676			947	
Approach Delay, s/veh		71.4			72.8			19.6			11.4	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	24.5	102.5		40.3		127.0		40.3				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	45.0	70.0		47.0		121.0		47.0				
Max Q Clear Time (g_c+I1), s	17.2	22.8		34.1		17.0		31.1				
Green Ext Time (p_c), s	1.4	3.5		0.2		3.8		2.0				

Intersection Summary												
HCM 6th Ctrl Delay			29.9									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1062	0	47	815	140	0	62	47	260	388	167
Future Volume (veh/h)	105	1062	0	47	815	140	0	62	47	260	388	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	1180	0	52	906	156	0	69	52	289	431	186
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	269	1352	0	193	1284	573	0	333	282	503	710	602
Arrive On Green	0.06	0.37	0.00	0.04	0.36	0.36	0.00	0.18	0.18	0.13	0.37	0.37
Sat Flow, veh/h	1810	3705	0	1810	3610	1610	0	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	117	1180	0	52	906	156	0	69	52	289	431	186
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	1805	1610	0	1900	1610	1810	1900	1610
Q Serve(g_s), s	3.5	26.0	0.0	1.5	18.5	5.9	0.0	2.7	2.4	10.9	15.7	7.0
Cycle Q Clear(g_c), s	3.5	26.0	0.0	1.5	18.5	5.9	0.0	2.7	2.4	10.9	15.7	7.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	1352	0	193	1284	573	0	333	282	503	710	602
V/C Ratio(X)	0.44	0.87	0.00	0.27	0.71	0.27	0.00	0.21	0.18	0.57	0.61	0.31
Avail Cap(c_a), veh/h	308	1476	0	224	1392	621	0	333	282	503	710	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	24.9	0.0	19.9	23.7	19.7	0.0	30.2	30.1	23.2	21.7	19.0
Incr Delay (d2), s/veh	1.1	5.7	0.0	0.7	1.5	0.3	0.0	0.3	0.3	1.6	3.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	11.0	0.0	0.6	7.4	2.1	0.0	1.1	0.9	4.5	7.1	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	30.6	0.0	20.6	25.2	19.9	0.0	30.5	30.4	24.8	25.5	20.3
LnGrp LOS	B	C	A	C	C	B	A	C	C	C	C	C
Approach Vol, veh/h		1297			1114			121			906	
Approach Delay, s/veh		29.6			24.3			30.5			24.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	17.0	21.0	9.5	38.1		38.0	11.2	36.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	15.0	5.0	35.0		32.0	7.0	33.0
Max Q Clear Time (g_c+I1), s	12.9	4.7	3.5	28.0		17.7	5.5	20.5
Green Ext Time (p_c), s	0.0	0.3	0.0	4.1		2.6	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	56	17	0	2	66	744	26	3	935	44
Future Vol, veh/h	33	0	56	17	0	2	66	744	26	3	935	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	0	62	19	0	2	73	827	29	3	1039	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2034	2047	1039	2074	2067	827	1088	0	0	856	0	0
Stage 1	1045	1045	-	973	973	-	-	-	-	-	-	-
Stage 2	989	1002	-	1101	1094	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	43	57	283	40	55	375	649	-	-	793	-	-
Stage 1	279	308	-	306	333	-	-	-	-	-	-	-
Stage 2	300	323	-	259	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	50	283	28	48	375	649	-	-	793	-	-
Mov Cap-2 Maneuver	39	50	-	28	48	-	-	-	-	-	-	-
Stage 1	248	305	-	272	296	-	-	-	-	-	-	-
Stage 2	265	287	-	200	289	-	-	-	-	-	-	-

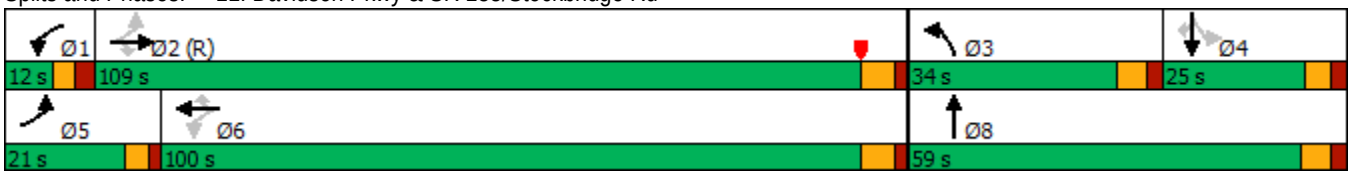
Approach	EB	WB	NB	SB
HCM Control Delay, s	117.9	244	0.9	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	649	-	-	39	283	28	375	793	-	-
HCM Lane V/C Ratio	0.113	-	-	0.94	0.22	0.675	0.006	0.004	-	-
HCM Control Delay (s)	11.3	-	-	281.9	21.3	271	14.7	9.6	0	-
HCM Lane LOS	B	-	-	F	C	F	B	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	3.6	0.8	2.2	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	1885	871	57	1215	61	663	28	70	27	188
Future Volume (vph)	165	1885	871	57	1215	61	663	28	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	3	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.0	14.0	14.0
Total Split (s)	21.0	109.0	109.0	12.0	100.0	100.0	34.0	59.0	25.0	25.0	25.0
Total Split (%)	11.7%	60.6%	60.6%	6.7%	55.6%	55.6%	18.9%	32.8%	13.9%	13.9%	13.9%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	119.3	107.0	107.0	109.7	102.2	102.2	27.4	48.2	15.0	15.0	15.0
Actuated g/C Ratio	0.66	0.59	0.59	0.61	0.57	0.57	0.15	0.27	0.08	0.08	0.08
v/c Ratio	0.59	0.80	0.81	0.45	0.54	0.07	0.91	0.25	0.70	0.18	0.81
Control Delay	17.2	35.7	22.4	28.8	24.5	2.2	91.3	21.2	112.0	77.5	56.0
Queue Delay	0.0	47.4	25.1	0.0	0.3	0.0	51.0	0.9	100.4	0.0	63.6
Total Delay	17.2	83.1	47.5	28.8	24.8	2.2	142.3	22.1	212.4	77.5	119.6
LOS	B	F	D	C	C	A	F	C	F	E	F
Approach Delay		68.8			23.9			123.8		138.4	
Approach LOS		E			C			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 69.4	Intersection LOS: E
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	172	1964	907	59	1266	64	691	126	73	28	196
v/c Ratio	0.59	0.80	0.81	0.45	0.54	0.07	0.91	0.25	0.70	0.18	0.81
Control Delay	17.2	35.7	22.4	28.8	24.5	2.2	91.3	21.2	112.0	77.5	56.0
Queue Delay	0.0	47.4	25.1	0.0	0.3	0.0	51.0	0.9	100.4	0.0	63.6
Total Delay	17.2	83.1	47.5	28.8	24.8	2.2	142.3	22.1	212.4	77.5	119.6
Queue Length 50th (ft)	75	731	642	12	516	5	288	44	85	31	90
Queue Length 95th (ft)	m114	850	912	43	578	21	#353	102	145	67	187
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	328	2447	1121	132	2336	950	776	537	132	196	274
Starvation Cap Reductn	0	748	246	0	474	0	0	0	0	0	0
Spillback Cap Reductn	0	81	0	0	0	0	348	224	90	0	107
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	1.16	1.04	0.45	0.68	0.07	1.61	0.40	1.74	0.14	1.17

Intersection Summary

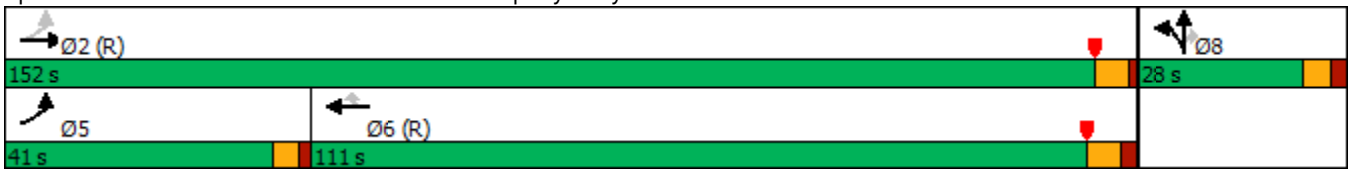
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	436	2740	1774	341	0	197
Future Volume (vph)	436	2740	1774	341	0	197
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	153.7	152.7	104.0	104.0	15.2	15.2
Actuated g/C Ratio	0.85	0.85	0.58	0.58	0.08	0.08
v/c Ratio	0.98	0.82	1.12	0.36	0.41	0.72
Control Delay	88.0	4.6	91.9	8.1	85.2	72.3
Queue Delay	0.0	44.4	0.9	1.2	0.0	0.1
Total Delay	88.0	49.0	92.7	9.4	85.2	72.5
LOS	F	D	F	A	F	E
Approach Delay		54.3	79.3		75.4	
Approach LOS		D	E		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 64.8	Intersection LOS: E
Intersection Capacity Utilization 97.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	454	2854	1848	355	61	205
v/c Ratio	0.98	0.82	1.12	0.36	0.41	0.72
Control Delay	88.0	4.6	91.9	8.1	85.2	72.3
Queue Delay	0.0	44.4	0.9	1.2	0.0	0.1
Total Delay	88.0	49.0	92.7	9.4	85.2	72.5
Queue Length 50th (ft)	493	291	~1292	24	70	100
Queue Length 95th (ft)	m#590	m300	#1428	m184	120	149
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	461	3492	1655	994	215	387
Starvation Cap Reductn	0	233	366	424	0	0
Spillback Cap Reductn	0	886	0	0	0	11
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	1.10	1.43	0.62	0.28	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

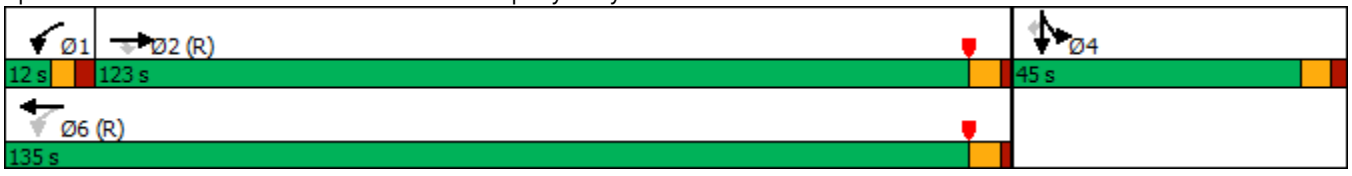
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

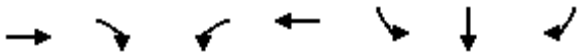
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2512	71	271	1560	687	0	706
Future Volume (vph)	2512	71	271	1560	687	0	706
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	123.0	123.0	12.0	135.0	45.0	45.0	45.0
Total Split (%)	68.3%	68.3%	6.7%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	117.1	117.1	129.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.65	0.65	0.72	0.72	0.21	0.21	0.21
v/c Ratio	0.97	0.09	2.76	0.78	0.99	0.99	1.22
Control Delay	25.6	6.4	817.2	13.4	112.7	112.7	170.4
Queue Delay	28.5	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	54.1	6.4	817.2	13.9	112.7	112.7	170.4
LOS	D	A	F	B	F	F	F
Approach Delay	52.8			132.7		141.9	
Approach LOS	D			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.76	
Intersection Signal Delay: 99.3	Intersection LOS: F
Intersection Capacity Utilization 97.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2590	73	279	1608	354	354	728
v/c Ratio	0.97	0.09	2.76	0.78	0.99	0.99	1.22
Control Delay	25.6	6.4	817.2	13.4	112.7	112.7	170.4
Queue Delay	28.5	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	54.1	6.4	817.2	13.9	112.7	112.7	170.4
Queue Length 50th (ft)	572	10	~519	254	444	444	~597
Queue Length 95th (ft)	m455	m12	m#456	m229	#677	#677	#743
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2678	853	101	2054	359	359	596
Starvation Cap Reductn	249	0	0	139	0	0	0
Spillback Cap Reductn	0	0	0	102	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.09	2.76	0.84	0.99	0.99	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

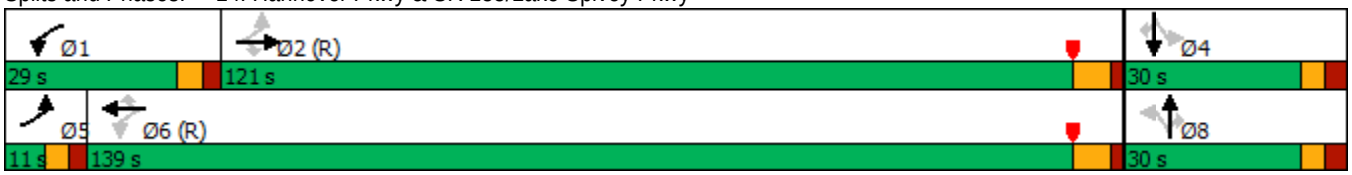
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

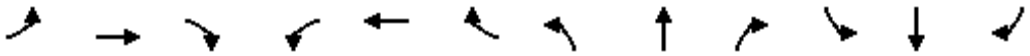
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	2228	47	197	1898	95	65	23	197	85	17	46
Future Volume (vph)	45	2228	47	197	1898	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.8	123.3	123.3	150.0	140.4	140.4	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.31	1.06	0.04	0.86	0.79	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	3.1	46.2	0.0	64.2	15.6	4.4	88.6	73.4	35.9	100.2	72.5	1.9
Queue Delay	0.0	16.5	0.0	0.0	4.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	3.1	62.7	0.0	64.2	20.1	4.4	88.6	73.4	36.0	100.2	72.5	1.9
LOS	A	E	A	E	C	A	F	E	D	F	E	A
Approach Delay		60.3			23.4			51.1			66.5	
Approach LOS		E			C			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 43.6	Intersection LOS: D
Intersection Capacity Utilization 100.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2321	49	205	1977	99	68	24	205	89	18	48
v/c Ratio	0.31	1.06	0.04	0.86	0.79	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	3.1	46.2	0.0	64.2	15.6	4.4	88.6	73.4	35.9	100.2	72.5	1.9
Queue Delay	0.0	16.5	0.0	0.0	4.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	3.1	62.7	0.0	64.2	20.1	4.4	88.6	73.4	36.0	100.2	72.5	1.9
Queue Length 50th (ft)	6	~1607	0	188	485	13	78	26	62	103	20	0
Queue Length 95th (ft)	m6	m#1498	m0	m222	m670	m17	132	58	156	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	154	2188	1112	270	2491	1246	182	244	337	181	244	289
Starvation Cap Reductn	0	37	0	0	441	0	0	0	0	0	0	0
Spillback Cap Reductn	0	79	0	0	0	0	0	0	3	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.10	0.04	0.76	0.96	0.08	0.37	0.10	0.61	0.49	0.07	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	212	1814	168	47	1514	382	148	87	391	79	211
Future Volume (vph)	212	1814	168	47	1514	382	148	87	391	79	211
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	109.1	99.5	99.5	90.7	83.6	83.6	33.0	17.5	58.6	37.2	37.2
Actuated g/C Ratio	0.61	0.55	0.55	0.50	0.46	0.46	0.18	0.10	0.33	0.21	0.21
v/c Ratio	0.99	1.09	0.19	0.49	1.09	0.48	0.57	0.75	1.00	0.22	0.48
Control Delay	103.5	75.8	5.7	35.0	86.7	14.4	56.2	97.3	97.1	60.8	19.9
Queue Delay	0.0	3.8	0.0	0.0	5.8	0.0	0.0	0.1	33.2	0.0	0.0
Total Delay	103.5	79.5	5.7	35.0	92.6	14.4	56.2	97.4	130.3	60.8	20.0
LOS	F	E	A	C	F	B	E	F	F	E	B
Approach Delay		76.2			75.8			75.3		88.1	
Approach LOS		E			E			E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 77.6	Intersection LOS: E
Intersection Capacity Utilization 104.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	226	1930	179	50	1611	406	157	136	416	84	224
v/c Ratio	0.99	1.09	0.19	0.49	1.09	0.48	0.57	0.75	1.00	0.22	0.48
Control Delay	103.5	75.8	5.7	35.0	86.7	14.4	56.2	97.3	97.1	60.8	19.9
Queue Delay	0.0	3.8	0.0	0.0	5.8	0.0	0.0	0.1	33.2	0.0	0.0
Total Delay	103.5	79.5	5.7	35.0	92.6	14.4	56.2	97.4	130.3	60.8	20.0
Queue Length 50th (ft)	~237	~1384	10	21	~1118	91	136	147	431	83	53
Queue Length 95th (ft)	m#309	#1512	m37	m31	#1247	162	203	#239	#621	139	144
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	228	1767	934	102	1483	840	282	195	416	392	467
Starvation Cap Reductn	0	52	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	252	0	0	51	0	0	1	39	0	3
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.27	0.19	0.49	1.13	0.48	0.56	0.70	1.10	0.21	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

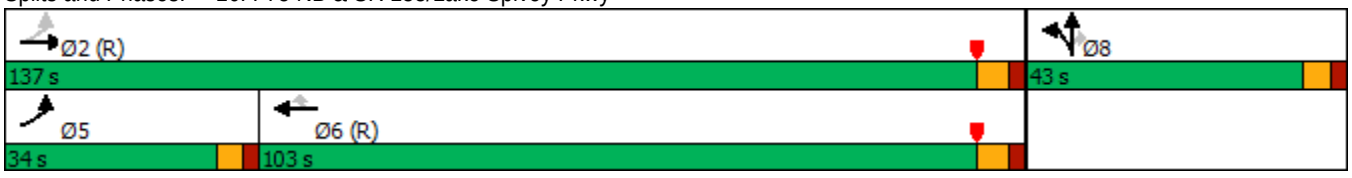
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	284	2202	1448	535	233	0	169
Future Volume (vph)	284	2202	1448	535	233	0	169
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	148.8	147.4	110.3	110.3	19.6	19.6	19.6
Actuated g/C Ratio	0.83	0.82	0.61	0.61	0.11	0.11	0.11
v/c Ratio	0.76	0.91	0.80	0.53	0.69	0.70	0.83
Control Delay	39.4	27.1	12.0	1.0	95.3	95.8	81.3
Queue Delay	0.0	45.5	6.0	0.4	0.2	0.2	0.1
Total Delay	39.4	72.6	18.0	1.4	95.6	96.1	81.3
LOS	D	E	B	A	F	F	F
Approach Delay		68.8	13.5			89.7	
Approach LOS		E	B			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 48.0	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	309	2393	1574	582	126	127	184
v/c Ratio	0.76	0.91	0.80	0.53	0.69	0.70	0.83
Control Delay	39.4	27.1	12.0	1.0	95.3	95.8	81.3
Queue Delay	0.0	45.5	6.0	0.4	0.2	0.2	0.1
Total Delay	39.4	72.6	18.0	1.4	95.6	96.1	81.3
Queue Length 50th (ft)	225	1335	113	0	153	155	152
Queue Length 95th (ft)	m258	m1270	m790	m2	225	226	237
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	418	2616	1957	1098	344	344	369
Starvation Cap Reductn	0	481	208	162	0	0	0
Spillback Cap Reductn	0	299	335	0	30	30	5
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.12	0.97	0.62	0.40	0.40	0.51

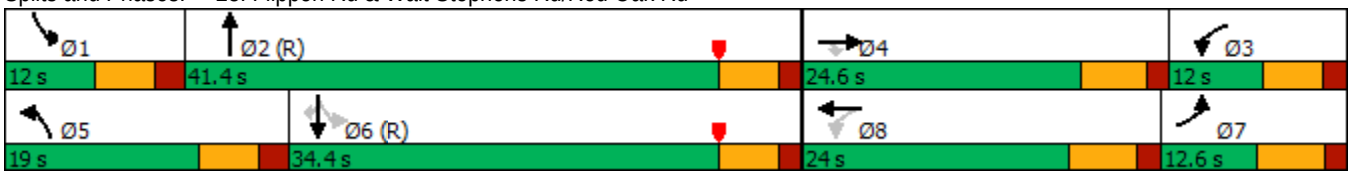
Intersection Summary

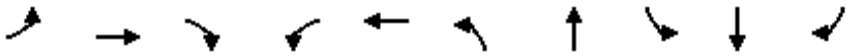
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	399	342	626	43	188	442	404	54	572	373
Future Volume (vph)	399	342	626	43	188	442	404	54	572	373
Turn Type	Prot	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			4	8				6		6
Detector Phase	7	4	4	3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	6.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	12.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	19.0	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	21.1%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	2.0	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.0	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	9.1	23.4	23.4	21.7	15.3	13.0	38.2	34.4	28.8	28.8
Actuated g/C Ratio	0.10	0.26	0.26	0.24	0.17	0.14	0.42	0.38	0.32	0.32
v/c Ratio	1.22	0.75	1.01	0.22	0.74	0.96	0.60	0.17	1.02	0.34
Control Delay	160.9	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.9	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	3.3
LOS	F	D	E	C	D	E	B	B	E	A
Approach Delay		84.6			44.6		43.5		44.8	
Approach LOS		F			D		D		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 60.0	Intersection LOS: E
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	429	368	673	46	237	475	472	58	615	401
v/c Ratio	1.22	0.75	1.01	0.22	0.74	0.96	0.60	0.17	1.02	0.34
Control Delay	160.9	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.9	44.7	57.8	25.8	48.3	75.9	10.9	12.7	74.9	3.3
Queue Length 50th (ft)	~168	208	~281	17	123	125	110	15	~362	0
Queue Length 95th (ft)	#280	#378	#496	41	198	m#183	m147	34	#580	33
Internal Link Dist (ft)		1944			3175		1869		1330	
Turn Bay Length (ft)	180		300	110		115		105		935
Base Capacity (vph)	351	488	665	208	373	495	784	346	601	1173
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.75	1.01	0.22	0.64	0.96	0.60	0.17	1.02	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

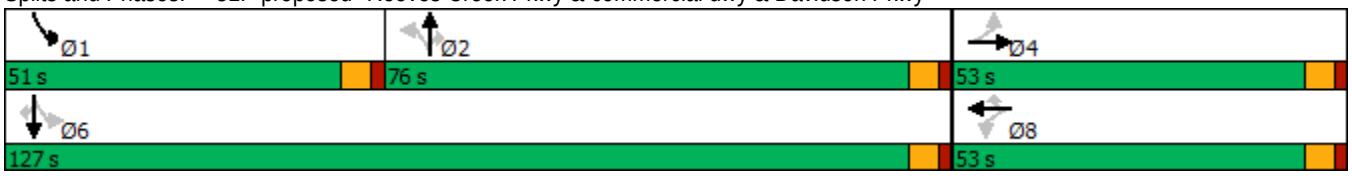
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	43	17	166	23	260	8	388	212	377	419	56
Future Volume (vph)	43	17	166	23	260	8	388	212	377	419	56
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8			2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	4	4	8	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	53.0	53.0	53.0	53.0	53.0	76.0	76.0	76.0	51.0	127.0	127.0
Total Split (%)	29.4%	29.4%	29.4%	29.4%	29.4%	42.2%	42.2%	42.2%	28.3%	70.6%	70.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	29.9	29.9		29.9	29.9	96.4	96.4	96.4	121.3	121.3	121.3
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.59	0.59	0.59	0.74	0.74	0.74
v/c Ratio	0.36	0.08		0.82	0.54	0.02	0.38	0.23	0.60	0.33	0.05
Control Delay	65.2	42.3		88.9	9.3	19.5	21.4	4.9	11.9	8.7	1.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	42.3		88.9	9.3	19.5	21.4	4.9	11.9	8.7	1.8
LOS	E	D		F	A	B	C	A	B	A	A
Approach Delay		57.2		42.8			15.6			9.7	
Approach LOS		E		D			B			A	

Intersection Summary		
Cycle Length: 180		
Actuated Cycle Length: 163.2		
Natural Cycle: 60		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.82		
Intersection Signal Delay: 20.6	Intersection LOS: C	
Intersection Capacity Utilization 73.4%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





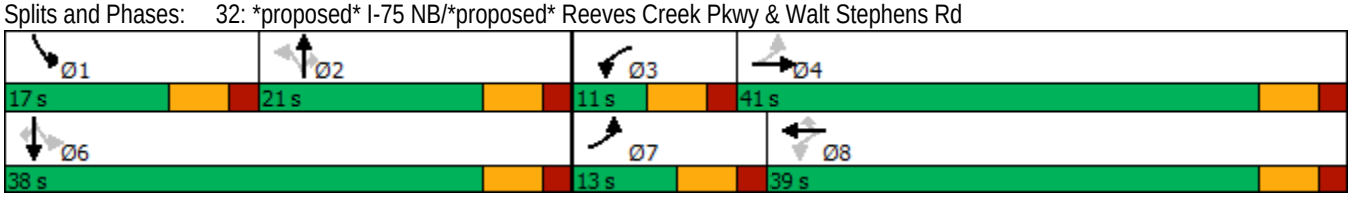
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	48	26	210	289	9	431	236	419	466	62
v/c Ratio	0.36	0.08	0.82	0.54	0.02	0.38	0.23	0.60	0.33	0.05
Control Delay	65.2	42.3	88.9	9.3	19.5	21.4	4.9	11.9	8.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	42.3	88.9	9.3	19.5	21.4	4.9	11.9	8.7	1.8
Queue Length 50th (ft)	45	17	218	0	4	231	17	135	152	0
Queue Length 95th (ft)	91	46	317	82	17	423	75	243	270	16
Internal Link Dist (ft)		467	910			658			1599	
Turn Bay Length (ft)										
Base Capacity (vph)	210	531	402	671	555	1122	1034	859	1411	1216
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.05	0.52	0.43	0.02	0.38	0.23	0.49	0.33	0.05

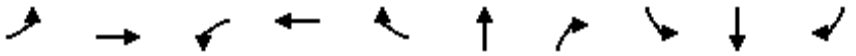
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	105	1062	47	815	140	62	47	260	388	167
Future Volume (vph)	105	1062	47	815	140	62	47	260	388	167
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2		1	6	
Permitted Phases	4		8		8		2	6		6
Detector Phase	7	4	3	8	8	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	13.0	41.0	11.0	39.0	39.0	21.0	21.0	17.0	38.0	38.0
Total Split (%)	14.4%	45.6%	12.2%	43.3%	43.3%	23.3%	23.3%	18.9%	42.2%	42.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	None	Max	Max
Act Effct Green (s)	37.0	33.1	33.1	29.3	29.3	15.7	15.7	32.4	32.4	32.4
Actuated g/C Ratio	0.44	0.39	0.39	0.35	0.35	0.19	0.19	0.39	0.39	0.39
v/c Ratio	0.46	0.83	0.27	0.72	0.23	0.19	0.12	0.60	0.59	0.25
Control Delay	18.0	29.5	15.4	27.8	3.0	33.7	0.5	27.0	26.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	29.5	15.4	27.8	3.0	33.7	0.5	27.0	26.3	4.9
LOS	B	C	B	C	A	C	A	C	C	A
Approach Delay		28.4		23.7		19.5			22.1	
Approach LOS		C		C		B			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 83.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 69.6%	ICU Level of Service C
Analysis Period (min) 15	

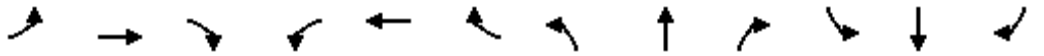
Splits and Phases: 32: *proposed* I-75 NB/*proposed* Reeves Creek Pkwy & Walt Stephens Rd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	1180	52	906	156	69	52	289	431	186
v/c Ratio	0.46	0.83	0.27	0.72	0.23	0.19	0.12	0.60	0.59	0.25
Control Delay	18.0	29.5	15.4	27.8	3.0	33.7	0.5	27.0	26.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	29.5	15.4	27.8	3.0	33.7	0.5	27.0	26.3	4.9
Queue Length 50th (ft)	33	314	14	225	0	34	0	124	202	3
Queue Length 95th (ft)	62	401	32	293	28	72	0	197	303	46
Internal Link Dist (ft)		4343		1944		882			1250	
Turn Bay Length (ft)										
Base Capacity (vph)	259	1549	192	1439	753	355	450	488	734	733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.76	0.27	0.63	0.21	0.19	0.12	0.59	0.59	0.25

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	949	988	40	1488	53	547	11	32	20	12	95
Future Volume (veh/h)	76	949	988	40	1488	53	547	11	32	20	12	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	999	0	42	1566	56	576	12	34	21	13	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	316	2445		450	2430	931	716	101	285	160	144	122
Arrive On Green	0.07	0.99	0.00	0.07	1.00	1.00	0.11	0.23	0.23	0.08	0.08	0.08
Sat Flow, veh/h	1781	4135	1585	1781	4135	1585	6484	431	1220	1360	1870	1585
Grp Volume(v), veh/h	80	999	0	42	1566	56	576	0	46	21	13	100
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1781	1378	1585	1621	0	1651	1360	1870	1585
Q Serve(g_s), s	2.3	0.7	0.0	1.2	0.0	0.0	11.3	0.0	2.9	1.9	0.8	8.1
Cycle Q Clear(g_c), s	2.3	0.7	0.0	1.2	0.0	0.0	11.3	0.0	2.9	1.9	0.8	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	316	2445		450	2430	931	716	0	385	160	144	122
V/C Ratio(X)	0.25	0.41		0.09	0.64	0.06	0.80	0.00	0.12	0.13	0.09	0.82
Avail Cap(c_a), veh/h	334	2445		475	2430	931	898	0	428	160	144	122
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.00	0.63	0.63	0.63	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	0.3	0.0	9.1	0.0	0.0	56.5	0.0	39.3	56.3	55.8	59.1
Incr Delay (d2), s/veh	0.3	0.4	0.0	0.1	0.5	0.0	4.3	0.0	0.1	0.4	0.3	34.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.0	0.4	0.1	0.0	4.9	0.0	1.2	0.7	0.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	0.7	0.0	9.1	0.5	0.0	60.8	0.0	39.4	56.6	56.0	93.1
LnGrp LOS	A	A		A	A	A	E	A	D	E	E	F
Approach Vol, veh/h		1079	A		1664			622			134	
Approach Delay, s/veh		1.4			0.7			59.2			83.8	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	83.2	20.4	16.3	10.7	82.7		36.7				
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 72	18.0	* 10	7.0	* 72		* 34				
Max Q Clear Time (g_c+I1), s	3.2	2.7	13.3	10.1	4.3	2.0		4.9				
Green Ext Time (p_c), s	0.0	18.4	1.1	0.0	0.0	38.6		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		14.5	
HCM 6th LOS		B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	622	1844	0	0	1745	437	48	0	184	0	0	0
Future Volume (veh/h)	622	1844	0	0	1745	437	48	0	184	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	676	2004	0	0	1897	475	52	0	200			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	551	3403	0	0	2131	817	136	0	212			
Arrive On Green	0.54	1.00	0.00	0.00	0.52	0.52	0.08	0.00	0.08			
Sat Flow, veh/h	1781	4271	0	0	4271	1585	1781	0	2790			
Grp Volume(v), veh/h	676	2004	0	0	1897	475	52	0	200			
Grp Sat Flow(s),veh/h/ln	1781	1378	0	0	1378	1585	1781	0	1395			
Q Serve(g_s), s	35.0	0.0	0.0	0.0	53.4	27.0	3.6	0.0	9.3			
Cycle Q Clear(g_c), s	35.0	0.0	0.0	0.0	53.4	27.0	3.6	0.0	9.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	551	3403	0	0	2131	817	136	0	212			
V/C Ratio(X)	1.23	0.59	0.00	0.00	0.89	0.58	0.38	0.00	0.94			
Avail Cap(c_a), veh/h	551	3435	0	0	2131	817	136	0	212			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.60	0.60	0.00	0.00	0.70	0.70	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.2	0.0	0.0	0.0	28.2	21.8	57.1	0.0	59.8			
Incr Delay (d2), s/veh	112.2	0.5	0.0	0.0	4.4	2.1	1.8	0.0	45.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.8	0.1	0.0	0.0	17.1	9.9	1.6	0.0	4.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	136.4	0.5	0.0	0.0	32.6	23.9	58.9	0.0	105.2			
LnGrp LOS	F	A	A	A	C	C	E	A	F			
Approach Vol, veh/h		2680			2372			252				
Approach Delay, s/veh		34.7			30.9			95.6				
Approach LOS		C			C			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.0			40.0	74.0		16.0				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.1E2			35.0	67.0		9.9				
Max Q Clear Time (g_c+I1), s		2.0			37.0	55.4		11.3				
Green Ext Time (p_c), s		69.6			0.0	11.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2034	84	281	1521	0	0	0	0	449	0	604
Future Volume (veh/h)	0	2034	84	281	1521	0	0	0	0	449	0	604
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1870	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2235	92	309	1671	0				493	0	664
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	26	2	2	26	0				2	2	2
Cap, veh/h	0	2961	901	215	1946	0				1221	0	725
Arrive On Green	0.00	1.00	1.00	0.06	0.68	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	5423	1585	3456	2954	0				5344	0	3170
Grp Volume(v), veh/h	0	2235	92	309	1671	0				493	0	664
Grp Sat Flow(s),veh/h/ln	0	1303	1585	1728	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	8.1	58.3	0.0				10.2	0.0	26.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.1	58.3	0.0				10.2	0.0	26.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2961	901	215	1946	0				1221	0	725
V/C Ratio(X)	0.00	0.75	0.10	1.44	0.86	0.00				0.40	0.00	0.92
Avail Cap(c_a), veh/h	0	2961	901	215	1946	0				1254	0	744
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.26	0.26	0.32	0.32	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	61.0	16.3	0.0				42.6	0.0	48.9
Incr Delay (d2), s/veh	0.0	0.5	0.1	204.2	1.8	0.0				0.3	0.0	16.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	9.6	16.7	0.0				4.4	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.1	265.2	18.0	0.0				42.9	0.0	65.0
LnGrp LOS	A	A	A	F	B	A				D	A	E
Approach Vol, veh/h		2327			1980						1157	
Approach Delay, s/veh		0.5			56.6						55.6	
Approach LOS		A			E						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.0	79.8		36.2		93.8
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	8.1	73.1		30.5		87.1
Max Q Clear Time (g_c+I1), s	10.1	2.0		28.6		60.3
Green Ext Time (p_c), s	0.0	60.0		1.1		21.8

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1907	27	92	1919	47	22	3	79	91	9	63
Future Volume (veh/h)	32	1907	27	92	1919	47	22	3	79	91	9	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	2096	30	101	2109	52	24	3	87	100	10	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	228	2354	1150	247	2390	1168	176	179	152	179	179	152
Arrive On Green	0.04	1.00	1.00	0.06	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1320	1870	1585	1307	1870	1585
Grp Volume(v), veh/h	35	2096	30	101	2109	52	24	3	87	100	10	69
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1320	1870	1585	1307	1870	1585
Q Serve(g_s), s	0.7	0.0	0.0	2.0	0.0	0.0	2.2	0.2	6.8	9.8	0.6	5.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	2.0	0.0	0.0	2.8	0.2	6.8	9.9	0.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	2354	1150	247	2390	1168	176	179	152	179	179	152
V/C Ratio(X)	0.15	0.89	0.03	0.41	0.88	0.04	0.14	0.02	0.57	0.56	0.06	0.45
Avail Cap(c_a), veh/h	249	2354	1150	276	2390	1168	258	296	251	261	296	251
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.29	0.29	0.29	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.7	53.2	56.2	57.7	53.4	55.6
Incr Delay (d2), s/veh	0.1	4.1	0.0	0.1	1.6	0.0	0.3	0.0	2.5	3.9	0.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.3	0.0	0.5	0.5	0.0	0.8	0.1	2.9	3.4	0.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	4.1	0.0	4.1	1.6	0.0	55.0	53.2	58.7	61.6	53.6	58.5
LnGrp LOS	A	A	A	A	A	A	D	D	E	E	D	E
Approach Vol, veh/h		2161			2262			114			179	
Approach Delay, s/veh		4.0			1.7			57.8			60.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.9	101.2		18.9	8.5	102.7		18.9
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4
Max Green Setting (Gmax), s	6.3	* 84		* 21	4.4	* 86		* 21
Max Q Clear Time (g_c+I1), s	4.0	2.0		11.9	2.7	2.0		8.8
Green Ext Time (p_c), s	0.0	66.4		0.5	0.0	68.5		0.2

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1671	84	31	1671	281	76	28	30	286	27	316
Future Volume (veh/h)	188	1671	84	31	1671	281	76	28	30	286	27	316
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1816	91	34	1816	305	83	30	33	311	29	343
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	281	2648	901	237	1700	831	240	82	90	366	301	255
Arrive On Green	0.14	1.00	1.00	0.07	1.00	1.00	0.05	0.10	0.10	0.11	0.16	0.16
Sat Flow, veh/h	1781	4661	1585	1781	3244	1585	1781	814	895	3456	1870	1585
Grp Volume(v), veh/h	204	1816	91	34	1816	305	83	0	63	311	29	343
Grp Sat Flow(s),veh/h/ln	1781	1554	1585	1781	1622	1585	1781	0	1709	1728	1870	1585
Q Serve(g_s), s	7.0	0.0	0.0	1.1	0.0	0.0	5.4	0.0	4.5	11.5	1.7	20.9
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.1	0.0	0.0	5.4	0.0	4.5	11.5	1.7	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	281	2648	901	237	1700	831	240	0	173	366	301	255
V/C Ratio(X)	0.73	0.69	0.10	0.14	1.07	0.37	0.35	0.00	0.36	0.85	0.10	1.35
Avail Cap(c_a), veh/h	316	2648	901	261	1700	831	240	0	173	425	301	255
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.37	0.37	0.37	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	0.0	0.0	12.6	0.0	0.0	49.6	0.0	54.5	57.1	46.5	54.6
Incr Delay (d2), s/veh	3.1	0.6	0.1	0.1	35.9	0.5	0.9	0.0	2.7	13.4	0.3	179.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.2	0.0	0.4	8.5	0.1	2.5	0.0	2.1	5.6	0.8	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	0.6	0.1	12.7	35.9	0.5	50.4	0.0	57.3	70.5	46.8	234.1
LnGrp LOS	B	A	A	B	F	A	D	A	E	E	D	F
Approach Vol, veh/h		2111			2155			146			683	
Approach Delay, s/veh		1.9			30.5			53.4			151.7	
Approach LOS		A			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	80.3	12.0	28.0	15.5	74.5	19.8	20.2
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.3	* 72	6.0	20.9	* 12	* 66	16.0	10.9
Max Q Clear Time (g_c+I1), s	13.1	2.0	7.4	22.9	9.0	2.0	13.5	6.5
Green Ext Time (p_c), s	0.0	47.5	0.0	0.0	0.1	50.4	0.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	766	1835	0	0	1264	877	342	0	243	0	0	0
Future Volume (veh/h)	766	1835	0	0	1264	877	342	0	243	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	842	2016	0	0	1389	0	376	0	267			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	680	2327	0	0	1658		651	0	290			
Arrive On Green	0.32	0.72	0.00	0.00	0.71	0.00	0.18	0.00	0.18			
Sat Flow, veh/h	1781	3329	0	0	4815	1585	3563	0	1585			
Grp Volume(v), veh/h	842	2016	0	0	1389	0	376	0	267			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1554	1585	1781	0	1585			
Q Serve(g_s), s	41.5	60.4	0.0	0.0	27.7	0.0	12.5	0.0	21.5			
Cycle Q Clear(g_c), s	41.5	60.4	0.0	0.0	27.7	0.0	12.5	0.0	21.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	680	2327	0	0	1658		651	0	290			
V/C Ratio(X)	1.24	0.87	0.00	0.00	0.84		0.58	0.00	0.92			
Avail Cap(c_a), veh/h	680	2327	0	0	1658		682	0	304			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.5	13.7	0.0	0.0	16.1	0.0	48.5	0.0	52.2			
Incr Delay (d2), s/veh	108.8	0.4	0.0	0.0	0.5	0.0	0.7	0.0	30.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	41.1	17.9	0.0	0.0	4.8	0.0	5.4	0.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.3	14.2	0.0	0.0	16.6	0.0	49.2	0.0	82.7			
LnGrp LOS	F	B	A	A	B		D	A	F			
Approach Vol, veh/h		2858			1389	A		643				
Approach Delay, s/veh		51.9			16.6			63.1				
Approach LOS		D			B			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		100.1			47.0	53.1		29.9				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		92.1			41.5	45.1		24.9				
Max Q Clear Time (g_c+I1), s		62.4			43.5	29.7		23.5				
Green Ext Time (p_c), s		26.7			0.0	11.7		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Reeves Creek (Stockbridge, GA) DRI #TBD 2035 Phase 2 Future with Project with NB Interchange AM
23: Flippen Rd & Walt Stephens Rd/Red Oak Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	201	490	22	264	29	421	399	18	23	337	436
Future Volume (veh/h)	304	201	490	22	264	29	421	399	18	23	337	436
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	338	223	0	24	293	32	468	443	20	26	374	484
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	4	4	4
Cap, veh/h	354	502		358	359	304	360	1123	501	367	861	676
Arrive On Green	0.10	0.27	0.00	0.03	0.19	0.19	0.10	0.32	0.32	0.03	0.25	0.25
Sat Flow, veh/h	3456	1870	1585	1767	1856	1572	3456	3554	1585	1753	3497	2745
Grp Volume(v), veh/h	338	223	0	24	293	32	468	443	20	26	374	484
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1767	1856	1572	1728	1777	1585	1753	1749	1373
Q Serve(g_s), s	6.5	6.7	0.0	0.7	10.2	1.1	7.0	6.6	0.6	0.7	6.1	10.9
Cycle Q Clear(g_c), s	6.5	6.7	0.0	0.7	10.2	1.1	7.0	6.6	0.6	0.7	6.1	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	502		358	359	304	360	1123	501	367	861	676
V/C Ratio(X)	0.95	0.44		0.07	0.82	0.11	1.30	0.39	0.04	0.07	0.43	0.72
Avail Cap(c_a), veh/h	354	528		464	494	418	360	1123	501	463	1009	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	20.5	0.0	20.5	26.0	22.3	30.1	18.0	15.9	17.7	21.4	23.2
Incr Delay (d2), s/veh	35.7	0.6	0.0	0.1	7.4	0.2	154.6	0.5	0.1	0.1	0.7	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.6	0.0	0.3	4.9	0.4	10.4	2.4	0.2	0.3	2.3	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	21.1	0.0	20.5	33.4	22.5	184.7	18.5	16.0	17.8	22.1	27.0
LnGrp LOS	E	C		C	C	C	F	B	B	B	C	C
Approach Vol, veh/h		561	A		349			931			884	
Approach Delay, s/veh		48.0			31.5			102.0			24.7	
Approach LOS		D			C			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	26.9	8.0	24.1	13.0	22.2	13.0	19.1
Change Period (Y+Rc), s	6.0	* 5.6	* 5.8	* 6.1	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 20	* 6.2	* 19	7.0	* 19	* 6.9	* 18
Max Q Clear Time (g_c+I1), s	2.7	8.6	2.7	8.7	9.0	12.9	8.5	12.2
Green Ext Time (p_c), s	0.0	3.6	0.0	0.7	0.0	3.7	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

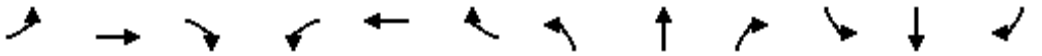
Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	0	53	21	0	85	16	720	8	38	558	24
Future Vol, veh/h	38	0	53	21	0	85	16	720	8	38	558	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	4	4	0
Mvmt Flow	42	0	59	23	0	94	18	800	9	42	620	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1592	1549	620	1583	1567	800	647	0	0	809	0	0
Stage 1	704	704	-	836	836	-	-	-	-	-	-	-
Stage 2	888	845	-	747	731	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	88	115	492	88	112	385	948	-	-	808	-	-
Stage 1	431	443	-	362	385	-	-	-	-	-	-	-
Stage 2	341	382	-	405	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	63	107	492	73	104	385	948	-	-	808	-	-
Mov Cap-2 Maneuver	63	107	-	73	104	-	-	-	-	-	-	-
Stage 1	423	420	-	355	378	-	-	-	-	-	-	-
Stage 2	252	375	-	338	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	65.7	29	0.2	0.6
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	948	-	-	63	492	73	385	808	-	-
HCM Lane V/C Ratio	0.019	-	-	0.67	0.12	0.32	0.245	0.052	-	-
HCM Control Delay (s)	8.9	-	-	138.7	13.3	76	17.4	9.7	-	-
HCM Lane LOS	A	-	-	F	B	F	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	0.4	1.2	0.9	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	28	9	217	53	316	18	188	84	191	639	133
Future Volume (veh/h)	70	28	9	217	53	316	18	188	84	191	639	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	31	10	241	59	351	20	209	93	212	710	148
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	278	464	393	382	464	393	354	999	847	277	1245	1055
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.53	0.53	0.53	0.08	0.66	0.66
Sat Flow, veh/h	991	1900	1610	1388	1900	1610	654	1900	1610	3510	1900	1610
Grp Volume(v), veh/h	78	31	10	241	59	351	20	209	93	212	710	148
Grp Sat Flow(s),veh/h/ln	991	1900	1610	1388	1900	1610	654	1900	1610	1755	1900	1610
Q Serve(g_s), s	7.9	1.5	0.6	19.2	2.9	25.1	2.1	7.0	3.5	7.0	24.5	4.2
Cycle Q Clear(g_c), s	10.8	1.5	0.6	20.7	2.9	25.1	11.2	7.0	3.5	7.0	24.5	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	464	393	382	464	393	354	999	847	277	1245	1055
V/C Ratio(X)	0.28	0.07	0.03	0.63	0.13	0.89	0.06	0.21	0.11	0.77	0.57	0.14
Avail Cap(c_a), veh/h	370	638	541	509	638	541	354	999	847	442	1245	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	34.6	34.2	42.5	35.1	43.5	18.6	15.0	14.2	53.8	11.3	7.8
Incr Delay (d2), s/veh	0.5	0.1	0.0	1.7	0.1	13.5	0.3	0.5	0.3	4.4	1.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.7	0.2	6.7	1.3	11.3	0.3	3.0	1.3	3.3	10.6	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	34.6	34.3	44.3	35.2	57.0	18.9	15.5	14.5	58.2	13.2	8.1
LnGrp LOS	D	C	C	D	D	E	B	B	B	E	B	A
Approach Vol, veh/h		119			651			322			1070	
Approach Delay, s/veh		38.0			50.3			15.4			21.4	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.4	68.6		35.0		84.0		35.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	15.0	57.0		40.0		78.0		40.0				
Max Q Clear Time (g_c+I1), s	9.0	13.2		12.8		26.5		27.1				
Green Ext Time (p_c), s	0.3	1.6		0.5		7.1		2.0				

Intersection Summary			
HCM 6th Ctrl Delay		30.1	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	653	0	88	738	298	0	143	24	121	179	89
Future Volume (veh/h)	193	653	0	88	738	298	0	143	24	121	179	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	214	726	0	98	820	331	0	159	27	134	199	99
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	331	1179	0	325	999	446	0	383	324	397	689	584
Arrive On Green	0.11	0.33	0.00	0.06	0.28	0.28	0.00	0.20	0.20	0.08	0.36	0.36
Sat Flow, veh/h	1810	3705	0	1810	3610	1610	0	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	214	726	0	98	820	331	0	159	27	134	199	99
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	1805	1610	0	1900	1610	1810	1900	1610
Q Serve(g_s), s	5.9	12.2	0.0	2.7	15.2	13.4	0.0	5.2	1.0	4.0	5.3	3.0
Cycle Q Clear(g_c), s	5.9	12.2	0.0	2.7	15.2	13.4	0.0	5.2	1.0	4.0	5.3	3.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	331	1179	0	325	999	446	0	383	324	397	689	584
V/C Ratio(X)	0.65	0.62	0.00	0.30	0.82	0.74	0.00	0.42	0.08	0.34	0.29	0.17
Avail Cap(c_a), veh/h	359	1259	0	368	1108	494	0	383	324	408	689	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	20.4	0.0	17.3	24.3	23.6	0.0	25.0	23.3	19.0	16.3	15.5
Incr Delay (d2), s/veh	3.6	0.8	0.0	0.5	4.6	5.4	0.0	0.7	0.1	0.5	1.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.6	0.0	1.0	6.4	5.2	0.0	2.1	0.3	1.5	2.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	21.2	0.0	17.8	28.9	29.0	0.0	25.7	23.4	19.5	17.3	16.1
LnGrp LOS	C	C	A	B	C	C	A	C	C	B	B	B
Approach Vol, veh/h		940			1249			186			432	
Approach Delay, s/veh		21.2			28.0			25.3			17.7	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	11.6	20.4	10.3	29.4		32.0	13.9	25.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	6.3	14.0	6.0	25.0		26.0	9.0	22.0
Max Q Clear Time (g_c+I1), s	10.0	7.2	4.7	14.2		7.3	7.9	17.2
Green Ext Time (p_c), s	0.0	0.4	0.0	3.4		1.2	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	105	37	0	4	34	684	15	2	612	23
Future Vol, veh/h	61	0	105	37	0	4	34	684	15	2	612	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	0	117	41	0	4	38	760	17	2	680	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1531	1537	680	1592	1546	760	706	0	0	777	0	0
Stage 1	684	684	-	836	836	-	-	-	-	-	-	-
Stage 2	847	853	-	756	710	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	97	117	454	88	116	409	902	-	-	848	-	-
Stage 1	442	452	-	364	385	-	-	-	-	-	-	-
Stage 2	359	378	-	403	440	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	93	112	454	63	111	409	902	-	-	848	-	-
Mov Cap-2 Maneuver	93	112	-	63	111	-	-	-	-	-	-	-
Stage 1	423	450	-	349	369	-	-	-	-	-	-	-
Stage 2	340	362	-	298	438	-	-	-	-	-	-	-

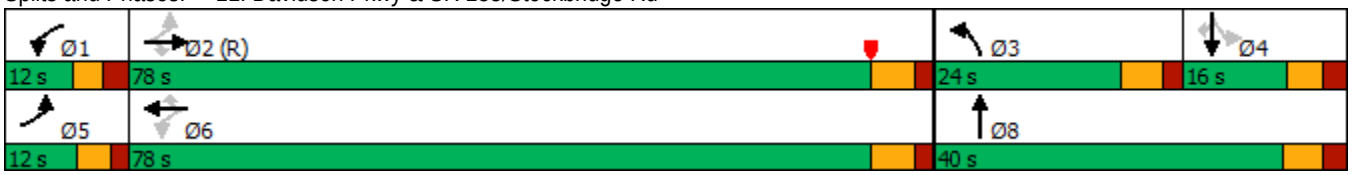
Approach	EB	WB	NB	SB
HCM Control Delay, s	50.6	123.5	0.4	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	902	-	-	93	454	63	409	848	-	-
HCM Lane V/C Ratio	0.042	-	-	0.729	0.257	0.653	0.011	0.003	-	-
HCM Control Delay (s)	9.2	-	-	110.8	15.7	135.3	13.9	9.3	0	-
HCM Lane LOS	A	-	-	F	C	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.7	1	2.8	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	76	949	988	40	1488	53	547	11	20	12	95
Future Volume (vph)	76	949	988	40	1488	53	547	11	20	12	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8		4	
Permitted Phases	2		2	6		6			4		4
Detector Phase	5	2	2	1	6	6	3	8	4	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.0	14.0	14.0
Total Split (s)	12.0	78.0	78.0	12.0	78.0	78.0	24.0	40.0	16.0	16.0	16.0
Total Split (%)	9.2%	60.0%	60.0%	9.2%	60.0%	60.0%	18.5%	30.8%	12.3%	12.3%	12.3%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	84.3	77.2	77.2	81.9	74.7	74.7	16.4	26.8	8.5	8.5	8.5
Actuated g/C Ratio	0.65	0.59	0.59	0.63	0.57	0.57	0.13	0.21	0.07	0.07	0.07
v/c Ratio	0.37	0.41	0.78	0.12	0.66	0.06	0.71	0.13	0.24	0.11	0.46
Control Delay	13.9	18.4	14.0	5.4	8.8	0.2	59.6	17.0	64.0	58.8	12.1
Queue Delay	0.0	0.0	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	13.9	18.4	14.8	5.4	9.0	0.2	59.6	17.0	64.0	58.8	12.2
LOS	B	B	B	A	A	A	E	B	E	E	B
Approach Delay		16.5			8.6			56.4		24.9	
Approach LOS		B			A			E		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 19.3	Intersection LOS: B
Intersection Capacity Utilization 87.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	80	999	1040	42	1566	56	576	46	21	13	100
v/c Ratio	0.37	0.41	0.78	0.12	0.66	0.06	0.71	0.13	0.24	0.11	0.46
Control Delay	13.9	18.4	14.0	5.4	8.8	0.2	59.6	17.0	64.0	58.8	12.1
Queue Delay	0.0	0.0	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	13.9	18.4	14.8	5.4	9.0	0.2	59.6	17.0	64.0	58.8	12.2
Queue Length 50th (ft)	25	193	594	3	49	0	129	8	17	11	0
Queue Length 95th (ft)	m39	309	540	m10	114	m1	160	40	45	32	36
Internal Link Dist (ft)		432			495			439		264	
Turn Bay Length (ft)	75		165	125							
Base Capacity (vph)	220	2444	1338	362	2366	962	892	454	104	143	236
Starvation Cap Reductn	0	0	89	0	191	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	245	0	0	0	0	0	7
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.41	0.83	0.12	0.74	0.06	0.65	0.10	0.20	0.09	0.44

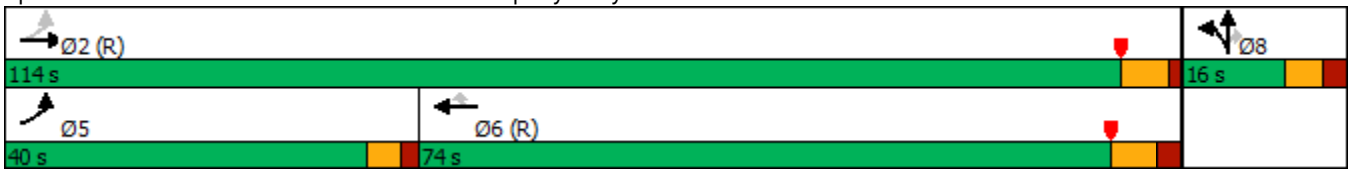
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	622	1844	1745	437	0	184
Future Volume (vph)	622	1844	1745	437	0	184
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	40.0	114.0	74.0	74.0	16.0	16.0
Total Split (%)	30.8%	87.7%	56.9%	56.9%	12.3%	12.3%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	109.4	108.4	66.9	66.9	9.5	9.5
Actuated g/C Ratio	0.84	0.83	0.51	0.51	0.07	0.07
v/c Ratio	1.25	0.58	0.90	0.50	0.41	0.73
Control Delay	151.7	7.5	28.2	7.7	67.2	52.5
Queue Delay	0.0	0.0	5.4	0.6	5.4	0.1
Total Delay	151.7	7.5	33.5	8.3	72.6	52.6
LOS	F	A	C	A	E	D
Approach Delay		43.9	28.5		56.7	
Approach LOS		D	C		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 37.6	Intersection LOS: D
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	676	2004	1897	475	52	200
v/c Ratio	1.25	0.58	0.90	0.50	0.41	0.73
Control Delay	151.7	7.5	28.2	7.7	67.2	52.5
Queue Delay	0.0	0.0	5.4	0.6	5.4	0.1
Total Delay	151.7	7.5	33.5	8.3	72.6	52.6
Queue Length 50th (ft)	~664	255	385	10	43	58
Queue Length 95th (ft)	#909	358	546	111	87	#111
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	542	3434	2121	953	134	282
Starvation Cap Reductn	0	0	185	198	0	0
Spillback Cap Reductn	0	113	120	0	44	1
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.25	0.60	0.98	0.63	0.58	0.71

Intersection Summary

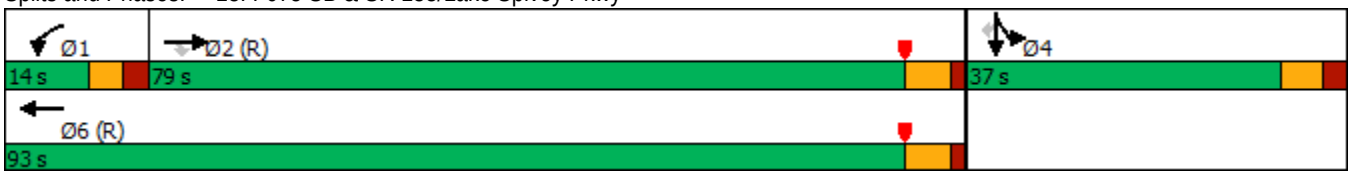
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

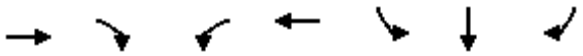
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2034	84	281	1521	449	0	604
Future Volume (vph)	2034	84	281	1521	449	0	604
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	79.0	79.0	14.0	93.0	37.0	37.0	37.0
Total Split (%)	60.8%	60.8%	10.8%	71.5%	28.5%	28.5%	28.5%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	71.5	71.5	8.1	85.5	32.1	32.1	32.1
Actuated g/C Ratio	0.55	0.55	0.06	0.66	0.25	0.25	0.25
v/c Ratio	0.78	0.10	1.45	0.89	0.42	0.41	0.97
Control Delay	16.5	2.8	265.0	13.9	43.5	45.5	75.9
Queue Delay	0.1	0.0	0.0	42.9	0.0	0.0	0.0
Total Delay	16.7	2.8	265.0	56.7	43.5	45.5	75.9
LOS	B	A	F	E	D	D	E
Approach Delay	16.1			89.2		62.4	
Approach LOS	B			F		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 41 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay: 52.4	Intersection LOS: D
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2235	92	309	1671	330	163	664
v/c Ratio	0.78	0.10	1.45	0.89	0.42	0.41	0.97
Control Delay	16.5	2.8	265.0	13.9	43.5	45.5	75.9
Queue Delay	0.1	0.0	0.0	42.9	0.0	0.0	0.0
Total Delay	16.7	2.8	265.0	56.7	43.5	45.5	75.9
Queue Length 50th (ft)	232	4	~179	771	131	129	~327
Queue Length 95th (ft)	m222	m6	m#215	865	180	207	#468
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	2916	930	213	1919	794	396	687
Starvation Cap Reductn	101	0	0	259	0	0	0
Spillback Cap Reductn	0	0	0	387	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.10	1.45	1.09	0.42	0.41	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

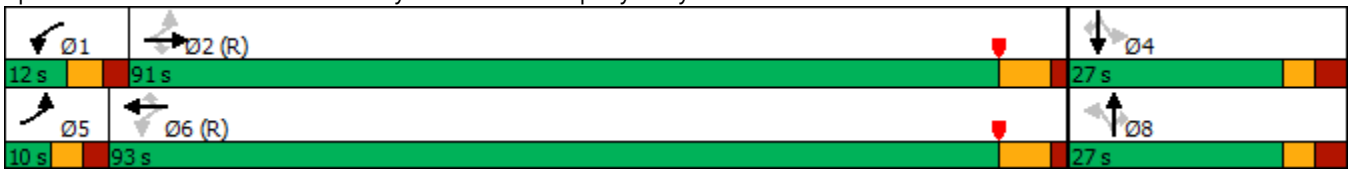
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

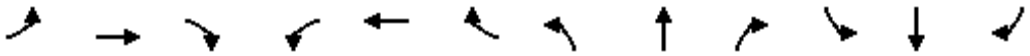
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1907	27	92	1919	47	22	3	79	91	9	63
Future Volume (vph)	32	1907	27	92	1919	47	22	3	79	91	9	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	10.0	91.0	91.0	12.0	93.0	93.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	7.7%	70.0%	70.0%	9.2%	71.5%	71.5%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	94.7	88.6	88.6	100.6	95.2	95.2	15.2	15.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.73	0.68	0.68	0.77	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.28	0.96	0.03	0.67	0.90	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	15.3	23.6	0.0	35.0	19.3	1.1	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	23.6	0.0	35.0	23.9	1.1	51.4	47.7	15.9	69.3	48.6	10.5
LOS	B	C	A	C	C	A	D	D	B	E	D	B
Approach Delay		23.2			23.8			24.2			45.5	
Approach LOS		C			C			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 52 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	35	2096	30	101	2109	52	24	3	87	100	10	69
v/c Ratio	0.28	0.96	0.03	0.67	0.90	0.04	0.15	0.01	0.34	0.61	0.05	0.27
Control Delay	15.3	23.6	0.0	35.0	19.3	1.1	51.4	47.7	15.9	69.3	48.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	23.6	0.0	35.0	23.9	1.1	51.4	47.7	15.9	69.3	48.6	10.5
Queue Length 50th (ft)	3	450	0	29	1001	0	18	2	5	81	8	0
Queue Length 95th (ft)	m9	#1115	m0	m47	m#1091	m0	44	12	53	137	24	35
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	123	2177	1102	152	2339	1179	221	295	318	223	295	318
Starvation Cap Reductn	0	0	0	0	181	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.96	0.03	0.66	0.98	0.04	0.11	0.01	0.27	0.45	0.03	0.22

Intersection Summary

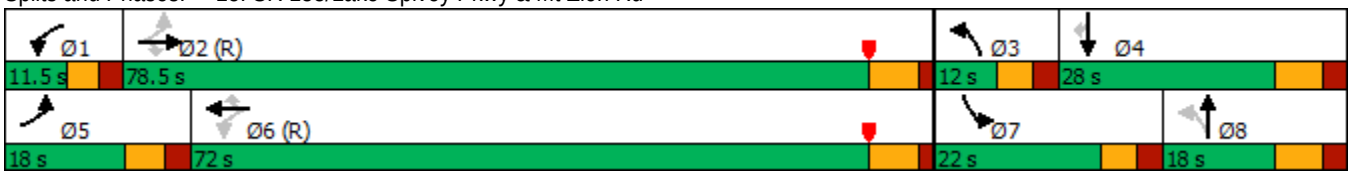
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	1671	84	31	1671	281	76	28	286	27	316
Future Volume (vph)	188	1671	84	31	1671	281	76	28	286	27	316
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8				4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	18.0	78.5	78.5	11.5	72.0	72.0	12.0	18.0	22.0	28.0	28.0
Total Split (%)	13.8%	60.4%	60.4%	8.8%	55.4%	55.4%	9.2%	13.8%	16.9%	21.5%	21.5%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	85.7	78.7	78.7	74.1	67.2	67.2	15.4	10.2	17.8	18.9	18.9
Actuated g/C Ratio	0.66	0.61	0.61	0.57	0.52	0.52	0.12	0.08	0.14	0.15	0.15
v/c Ratio	0.91	0.65	0.09	0.20	1.10	0.33	0.46	0.38	0.66	0.11	0.90
Control Delay	69.0	9.2	0.1	11.7	73.8	5.8	49.8	37.9	61.5	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	9.2	0.1	11.7	73.8	5.8	49.8	37.9	61.5	47.9	52.2
LOS	E	A	A	B	E	A	D	D	E	D	D
Approach Delay		14.6			63.2			44.7		56.3	
Approach LOS		B			E			D		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 40 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 41.6	Intersection LOS: D
Intersection Capacity Utilization 87.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	1816	91	34	1816	305	83	63	311	29	343
v/c Ratio	0.91	0.65	0.09	0.20	1.10	0.33	0.46	0.38	0.66	0.11	0.90
Control Delay	69.0	9.2	0.1	11.7	73.8	5.8	49.8	37.9	61.5	47.9	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	9.2	0.1	11.7	73.8	5.8	49.8	37.9	61.5	47.9	52.2
Queue Length 50th (ft)	115	299	0	10	~922	38	54	24	132	21	142
Queue Length 95th (ft)	m#189	338	m0	m13	#1062	m59	100	71	184	51	#306
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	223	2777	1029	166	1651	930	181	174	474	299	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.65	0.09	0.20	1.10	0.33	0.46	0.36	0.66	0.10	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

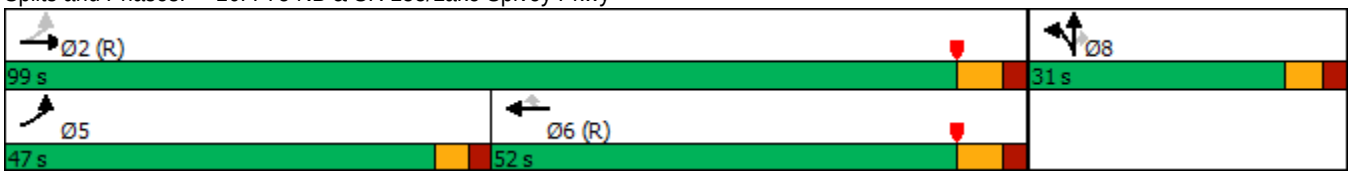
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	766	1835	1264	877	342	0	243
Future Volume (vph)	766	1835	1264	877	342	0	243
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	47.0	99.0	52.0	52.0	31.0	31.0	31.0
Total Split (%)	36.2%	76.2%	40.0%	40.0%	23.8%	23.8%	23.8%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	98.6	97.2	45.1	45.1	19.8	19.8	19.8
Actuated g/C Ratio	0.76	0.75	0.35	0.35	0.15	0.15	0.15
v/c Ratio	1.22	0.84	0.87	1.16	0.74	0.74	0.87
Control Delay	129.6	19.9	36.3	92.3	69.2	69.2	63.9
Queue Delay	0.0	20.7	0.0	0.0	0.0	0.0	0.0
Total Delay	129.6	40.6	36.3	92.3	69.2	69.2	63.9
LOS	F	D	D	F	E	E	E
Approach Delay		66.8	59.2			67.0	
Approach LOS		E	E			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 32 (25%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 63.8	Intersection LOS: E
Intersection Capacity Utilization 121.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	842	2016	1389	964	188	188	267
v/c Ratio	1.22	0.84	0.87	1.16	0.74	0.74	0.87
Control Delay	129.6	19.9	36.3	92.3	69.2	69.2	63.9
Queue Delay	0.0	20.7	0.0	0.0	0.0	0.0	0.0
Total Delay	129.6	40.6	36.3	92.3	69.2	69.2	63.9
Queue Length 50th (ft)	~833	956	322	~415	160	160	158
Queue Length 95th (ft)	m#703	m586	m296	m#308	238	238	254
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	693	2389	1592	833	321	321	367
Starvation Cap Reductn	0	442	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	1.04	0.87	1.16	0.59	0.59	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

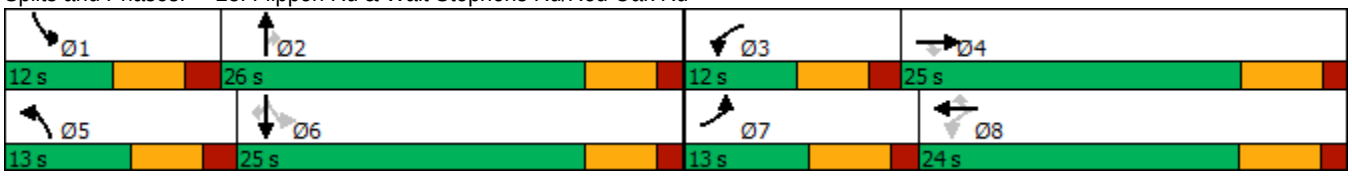
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

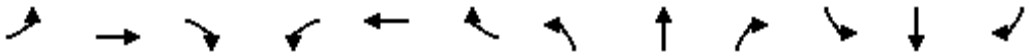
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	304	201	490	22	264	29	421	399	18	23	337	436
Future Volume (vph)	304	201	490	22	264	29	421	399	18	23	337	436
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	8.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	24.0	12.0	24.0	24.0	12.0	24.0	24.0
Total Split (s)	13.0	25.0	25.0	12.0	24.0	24.0	13.0	26.0	26.0	12.0	25.0	25.0
Total Split (%)	17.3%	33.3%	33.3%	16.0%	32.0%	32.0%	17.3%	34.7%	34.7%	16.0%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	1.6	2.0	1.6	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.1	6.0	5.6	5.6	6.0	5.6	5.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.0	23.6	23.6	21.3	14.8	14.8	7.1	24.0	24.0	21.0	15.4	15.4
Actuated g/C Ratio	0.10	0.35	0.35	0.31	0.22	0.22	0.10	0.35	0.35	0.31	0.23	0.23
v/c Ratio	0.97	0.35	0.62	0.06	0.73	0.06	1.32	0.36	0.03	0.07	0.48	0.49
Control Delay	75.9	21.1	7.3	13.1	36.8	0.2	192.3	19.5	0.1	13.6	25.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	21.1	7.3	13.1	36.8	0.2	192.3	19.5	0.1	13.6	25.5	4.3
LOS	E	C	A	B	D	A	F	B	A	B	C	A
Approach Delay		31.0			31.8			105.9			13.5	
Approach LOS		C			C			F			B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 68.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 47.7	Intersection LOS: D
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	338	223	544	24	293	32	468	443	20	26	374	484
v/c Ratio	0.97	0.35	0.62	0.06	0.73	0.06	1.32	0.36	0.03	0.07	0.48	0.49
Control Delay	75.9	21.1	7.3	13.1	36.8	0.2	192.3	19.5	0.1	13.6	25.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	21.1	7.3	13.1	36.8	0.2	192.3	19.5	0.1	13.6	25.5	4.3
Queue Length 50th (ft)	76	61	12	6	116	0	~140	64	0	6	73	0
Queue Length 95th (ft)	#168	151	111	19	202	0	#243	132	0	20	114	37
Internal Link Dist (ft)		1906			3175			1869			1364	
Turn Bay Length (ft)	180		300	110			115			105		935
Base Capacity (vph)	350	643	871	413	487	568	355	1276	709	352	994	1128
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.35	0.62	0.06	0.60	0.06	1.32	0.35	0.03	0.07	0.38	0.43

Intersection Summary

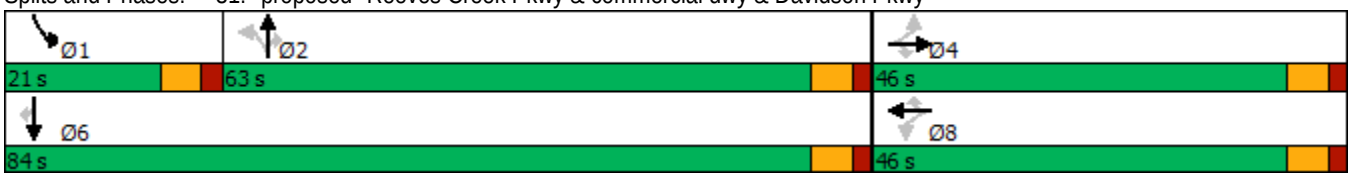
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

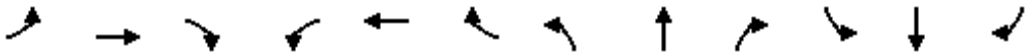
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	28	9	217	53	316	18	188	84	191	639	133
Future Volume (vph)	70	28	9	217	53	316	18	188	84	191	639	133
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	4	4	4	8	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	46.0	46.0	46.0	46.0	46.0	46.0	63.0	63.0	63.0	21.0	84.0	84.0
Total Split (%)	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	48.5%	48.5%	48.5%	16.2%	64.6%	64.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	26.1	26.1	26.1	26.1	26.1	26.1	60.3	60.3	60.3	12.0	78.4	78.4
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.22	0.52	0.52	0.52	0.10	0.67	0.67
v/c Ratio	0.26	0.07	0.02	0.77	0.14	0.55	0.05	0.21	0.11	0.59	0.56	0.13
Control Delay	38.2	34.3	0.1	58.7	35.5	7.1	18.4	18.1	4.2	57.7	13.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	34.3	0.1	58.7	35.5	7.1	18.4	18.1	4.2	57.7	13.4	1.8
LOS	D	C	A	E	D	A	B	B	A	E	B	A
Approach Delay		34.0			28.8			14.1			20.6	
Approach LOS		C			C			B			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 116.5	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization 71.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





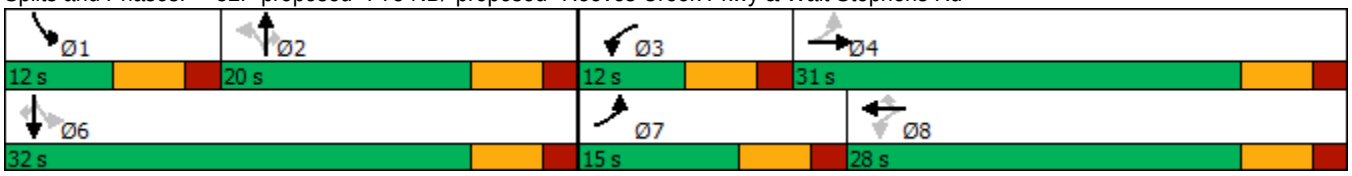
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	31	10	241	59	351	20	209	93	212	710	148
v/c Ratio	0.26	0.07	0.02	0.77	0.14	0.55	0.05	0.21	0.11	0.59	0.56	0.13
Control Delay	38.2	34.3	0.1	58.7	35.5	7.1	18.4	18.1	4.2	57.7	13.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	34.3	0.1	58.7	35.5	7.1	18.4	18.1	4.2	57.7	13.4	1.8
Queue Length 50th (ft)	48	18	0	170	36	0	7	82	0	78	250	0
Queue Length 95th (ft)	91	43	0	260	70	71	26	164	32	128	477	27
Internal Link Dist (ft)		448			896			799			1580	
Turn Bay Length (ft)												
Base Capacity (vph)	471	655	606	482	655	786	383	983	880	453	1277	1134
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.05	0.02	0.50	0.09	0.45	0.05	0.21	0.11	0.47	0.56	0.13

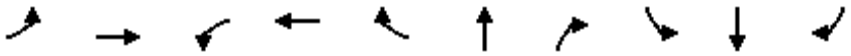
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	193	653	88	738	298	143	24	121	179	89
Future Volume (vph)	193	653	88	738	298	143	24	121	179	89
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2		1	6	
Permitted Phases	4		8		8		2	6		6
Detector Phase	7	4	3	8	8	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	15.0	31.0	12.0	28.0	28.0	20.0	20.0	12.0	32.0	32.0
Total Split (%)	20.0%	41.3%	16.0%	37.3%	37.3%	26.7%	26.7%	16.0%	42.7%	42.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	None	Max	Max
Act Effct Green (s)	33.4	26.3	26.8	20.9	20.9	16.6	16.6	26.0	26.0	26.0
Actuated g/C Ratio	0.45	0.36	0.36	0.28	0.28	0.22	0.22	0.35	0.35	0.35
v/c Ratio	0.68	0.56	0.31	0.80	0.48	0.37	0.05	0.34	0.30	0.15
Control Delay	25.8	22.0	13.6	31.6	5.2	29.6	0.2	20.0	19.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	22.0	13.6	31.6	5.2	29.6	0.2	20.0	19.3	2.5
LOS	C	C	B	C	A	C	A	B	B	A
Approach Delay		22.9		23.2		25.3			15.6	
Approach LOS		C		C		C			B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 73.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 22.1	Intersection LOS: C
Intersection Capacity Utilization 68.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 32: *proposed* I-75 NB/*proposed* Reeves Creek Pkwy & Walt Stephens Rd



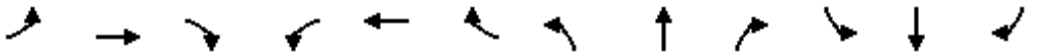


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	214	726	98	820	331	159	27	134	199	99
v/c Ratio	0.68	0.56	0.31	0.80	0.48	0.37	0.05	0.34	0.30	0.15
Control Delay	25.8	22.0	13.6	31.6	5.2	29.6	0.2	20.0	19.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	22.0	13.6	31.6	5.2	29.6	0.2	20.0	19.3	2.5
Queue Length 50th (ft)	54	146	23	182	0	66	0	43	66	0
Queue Length 95th (ft)	#135	201	47	247	55	122	0	82	117	19
Internal Link Dist (ft)		4380		1906		690			1068	
Turn Bay Length (ft)										
Base Capacity (vph)	315	1287	318	1076	713	426	531	395	669	654
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.56	0.31	0.76	0.46	0.37	0.05	0.34	0.30	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Reeves Creek (Stockbridge, GA) DRI #TBD 2035 Phase 2 Future with Project with NB Interchange PM 11: Davidson Pkwy & SR 138/Stockbridge Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	2062	1094	77	1323	61	884	28	150	70	27	188
Future Volume (veh/h)	165	2062	1094	77	1323	61	884	28	150	70	27	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1515	1870	1870	1515	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	2148	0	80	1378	64	921	29	156	73	28	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	26	2	2	26	2	2	2	2	2	2	2
Cap, veh/h	242	2376		120	2300	882	994	547	463	167	197	167
Arrive On Green	0.05	0.57	0.00	0.02	0.37	0.37	0.15	0.29	0.29	0.11	0.11	0.11
Sat Flow, veh/h	1781	4135	1585	1781	4135	1585	6484	1870	1585	1199	1870	1585
Grp Volume(v), veh/h	172	2148	0	80	1378	64	921	29	156	73	28	196
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1781	1378	1585	1621	1870	1585	1199	1870	1585
Q Serve(g_s), s	7.5	82.8	0.0	3.5	48.4	4.7	25.2	2.0	13.9	10.4	2.4	19.0
Cycle Q Clear(g_c), s	7.5	82.8	0.0	3.5	48.4	4.7	25.2	2.0	13.9	10.4	2.4	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	2376		120	2300	882	994	547	463	167	197	167
V/C Ratio(X)	0.71	0.90		0.67	0.60	0.07	0.93	0.05	0.34	0.44	0.14	1.17
Avail Cap(c_a), veh/h	305	2376		126	2300	882	1009	548	464	167	197	167
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.24	0.24	0.00	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	33.9	0.0	41.5	40.3	26.5	75.2	45.8	50.0	76.7	73.1	80.5
Incr Delay (d2), s/veh	1.4	1.7	0.0	9.2	0.5	0.1	13.9	0.0	0.4	1.8	0.3	123.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	26.8	0.0	2.3	17.2	1.8	11.6	1.0	5.7	3.4	1.2	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	35.6	0.0	50.7	40.8	26.6	89.1	45.8	50.4	78.5	73.4	203.7
LnGrp LOS	C	D		D	D	C	F	D	D	E	E	F
Approach Vol, veh/h		2320	A		1522			1106			297	
Approach Delay, s/veh		35.1			40.7			82.5			160.6	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	109.7	33.6	25.3	14.7	106.4		58.9				
Change Period (Y+Rc), s	5.5	* 6.3	6.0	* 6.3	5.0	* 6.3		* 6.3				
Max Green Setting (Gmax), s	6.5	* 1E2	28.0	* 19	16.0	* 94		* 53				
Max Q Clear Time (g_c+I1), s	5.5	84.8	27.2	21.0	9.5	50.4		15.9				
Green Ext Time (p_c), s	0.0	16.7	0.4	0.0	0.2	25.2		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	491	3126	0	0	2084	394	66	0	235	0	0	0
Future Volume (veh/h)	491	3126	0	0	2084	394	66	0	235	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1515	0	0	1515	1870	1870	1870	1870			
Adj Flow Rate, veh/h	511	3256	0	0	2171	410	69	0	245			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	26	0	0	26	2	2	2	2			
Cap, veh/h	415	3419	0	0	2477	949	179	0	280			
Arrive On Green	0.40	1.00	0.00	0.00	0.60	0.60	0.10	0.00	0.10			
Sat Flow, veh/h	1781	4271	0	0	4271	1585	1781	0	2790			
Grp Volume(v), veh/h	511	3256	0	0	2171	410	69	0	245			
Grp Sat Flow(s),veh/h/ln	1781	1378	0	0	1378	1585	1781	0	1395			
Q Serve(g_s), s	36.0	0.0	0.0	0.0	79.8	25.2	6.5	0.0	15.6			
Cycle Q Clear(g_c), s	36.0	0.0	0.0	0.0	79.8	25.2	6.5	0.0	15.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	415	3419	0	0	2477	949	179	0	280			
V/C Ratio(X)	1.23	0.95	0.00	0.00	0.88	0.43	0.39	0.00	0.87			
Avail Cap(c_a), veh/h	415	3419	0	0	2477	949	217	0	339			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.33	0.33	0.00	0.00	0.61	0.61	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.0	0.0	0.0	0.0	30.5	19.5	75.8	0.0	79.8			
Incr Delay (d2), s/veh	111.1	3.0	0.0	0.0	3.0	0.9	1.4	0.0	18.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	28.0	1.0	0.0	0.0	25.8	9.3	3.0	0.0	6.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	157.0	3.0	0.0	0.0	33.5	20.4	77.1	0.0	98.8			
LnGrp LOS	F	A	A	A	C	C	E	A	F			
Approach Vol, veh/h		3767			2581			314				
Approach Delay, s/veh		23.9			31.4			94.0				
Approach LOS		C			C			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		155.8			41.0	114.8		24.2				
Change Period (Y+Rc), s		* 7			5.0	7.0		6.1				
Max Green Setting (Gmax), s		* 1.5E2			36.0	104.0		21.9				
Max Q Clear Time (g_c+I1), s		2.0			38.0	81.8		17.6				
Green Ext Time (p_c), s		140.3			0.0	21.2		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2848	80	354	1795	0	0	0	0	798	0	795
Future Volume (veh/h)	0	2848	80	354	1795	0	0	0	0	798	0	795
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1515	1515	1870	1515	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2936	82	365	1851	0				823	0	820
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	26	26	2	26	0				2	2	2
Cap, veh/h	0	3245	799	213	2064	0				1143	0	678
Arrive On Green	0.00	1.00	1.00	0.12	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	5423	1284	3456	2954	0				5344	0	3170
Grp Volume(v), veh/h	0	2936	82	365	1851	0				823	0	820
Grp Sat Flow(s),veh/h/ln	0	1303	1284	1728	1439	0				1781	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	11.1	0.0	0.0				25.8	0.0	38.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	11.1	0.0	0.0				25.8	0.0	38.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3245	799	213	2064	0				1143	0	678
V/C Ratio(X)	0.00	0.90	0.10	1.71	0.90	0.00				0.72	0.00	1.21
Avail Cap(c_a), veh/h	0	3245	799	213	2064	0				1143	0	678
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.29	0.29	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	78.9	0.0	0.0				65.7	0.0	70.8
Incr Delay (d2), s/veh	0.0	0.5	0.0	326.5	2.1	0.0				2.3	0.0	107.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	14.2	0.6	0.0				11.8	0.0	25.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.0	405.4	2.1	0.0				68.1	0.0	178.4
LnGrp LOS	A	A	A	F	A	A				E	A	F
Approach Vol, veh/h		3018			2216						1643	
Approach Delay, s/veh		0.5			68.5						123.1	
Approach LOS		A			E						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.0	118.0		45.0		135.0
Change Period (Y+Rc), s	5.9	5.9		6.5		5.9
Max Green Setting (Gmax), s	11.1	112.1		38.5		129.1
Max Q Clear Time (g_c+I1), s	13.1	2.0		40.5		2.0
Green Ext Time (p_c), s	0.0	105.0		0.0		74.9

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	2528	47	197	2175	95	65	23	197	85	17	46
Future Volume (veh/h)	45	2528	47	197	2175	95	65	23	197	85	17	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2633	49	205	2266	99	68	24	205	89	18	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	180	2241	1095	232	2413	1179	204	245	208	178	245	208
Arrive On Green	0.04	1.00	1.00	0.14	1.00	1.00	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3244	1585	1781	3244	1585	1335	1870	1585	1152	1870	1585
Grp Volume(v), veh/h	47	2633	49	205	2266	99	68	24	205	89	18	48
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1781	1622	1585	1335	1870	1585	1152	1870	1585
Q Serve(g_s), s	1.4	124.4	0.0	9.2	0.0	0.0	8.5	2.0	23.2	13.3	1.5	4.9
Cycle Q Clear(g_c), s	1.4	124.4	0.0	9.2	0.0	0.0	10.0	2.0	23.2	15.3	1.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	180	2241	1095	232	2413	1179	204	245	208	178	245	208
V/C Ratio(X)	0.26	1.17	0.04	0.89	0.94	0.08	0.33	0.10	0.99	0.50	0.07	0.23
Avail Cap(c_a), veh/h	197	2241	1095	333	2413	1179	204	245	208	178	245	208
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.44	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	0.0	35.1	0.0	0.0	73.0	68.8	78.0	75.6	68.6	70.1
Incr Delay (d2), s/veh	0.1	81.0	0.0	1.5	1.0	0.0	0.7	0.1	58.3	3.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	25.2	0.0	8.6	0.3	0.0	3.0	1.0	13.0	4.1	0.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	81.0	0.0	36.6	1.0	0.0	73.7	69.0	136.4	78.6	68.8	70.9
LnGrp LOS	A	F	A	D	A	A	E	E	F	E	E	E
Approach Vol, veh/h		2729			2570			297			155	
Approach Delay, s/veh		78.3			3.8			116.6			75.1	
Approach LOS		E			A			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	131.9		30.0	9.2	140.8		30.0				
Change Period (Y+Rc), s	6.0	* 6.9		* 6.4	5.6	* 6.9		* 6.4				
Max Green Setting (Gmax), s	23.0	* 1.1E2		* 24	5.4	* 1.3E2		* 24				
Max Q Clear Time (g_c+I1), s	11.2	126.4		17.3	3.4	2.0		25.2				
Green Ext Time (p_c), s	0.2	0.0		0.4	0.0	106.5		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	2060	168	47	1739	434	148	87	40	442	79	237
Future Volume (veh/h)	239	2060	168	47	1739	434	148	87	40	442	79	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1870	1870	1707	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	254	2191	179	50	1850	462	157	93	43	470	84	252
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	13	2	2	13	2	2	2	2	2	2	2
Cap, veh/h	215	2665	906	169	1620	792	301	131	60	521	328	278
Arrive On Green	0.20	1.00	1.00	0.06	1.00	1.00	0.08	0.11	0.11	0.15	0.18	0.18
Sat Flow, veh/h	1781	4661	1585	1781	3244	1585	1781	1210	560	3456	1870	1585
Grp Volume(v), veh/h	254	2191	179	50	1850	462	157	0	136	470	84	252
Grp Sat Flow(s),veh/h/ln	1781	1554	1585	1781	1622	1585	1781	0	1770	1728	1870	1585
Q Serve(g_s), s	17.7	0.0	0.0	2.4	89.9	0.1	14.1	0.0	13.4	24.1	7.0	28.1
Cycle Q Clear(g_c), s	17.7	0.0	0.0	2.4	89.9	0.1	14.1	0.0	13.4	24.1	7.0	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	215	2665	906	169	1620	792	301	0	191	521	328	278
V/C Ratio(X)	1.18	0.82	0.20	0.30	1.14	0.58	0.52	0.00	0.71	0.90	0.26	0.91
Avail Cap(c_a), veh/h	215	2665	906	175	1620	792	301	0	191	653	394	334
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.34	0.34	0.34	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	0.0	0.0	19.8	0.1	0.0	64.6	0.0	77.6	75.1	64.1	72.8
Incr Delay (d2), s/veh	85.9	0.3	0.0	0.3	66.6	1.1	1.6	0.0	14.5	13.6	0.9	27.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.9	0.1	0.0	1.0	15.0	0.3	6.6	0.0	6.9	11.6	3.4	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	143.4	0.3	0.0	20.1	66.7	1.1	66.2	0.0	92.1	88.7	64.9	100.5
LnGrp LOS	F	A	A	C	F	A	E	A	F	F	E	F
Approach Vol, veh/h		2624			2362			293			806	
Approach Delay, s/veh		14.1			52.9			78.2			89.9	
Approach LOS		B			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	109.3	21.0	38.7	24.0	96.3	33.2	26.5
Change Period (Y+Rc), s	5.5	* 6.4	6.0	7.1	* 6.3	* 6.4	6.0	7.1
Max Green Setting (Gmax), s	6.1	* 96	15.0	37.9	* 18	* 84	34.0	18.9
Max Q Clear Time (g_c+I1), s	4.4	2.0	16.1	30.1	19.7	91.9	26.1	15.4
Green Ext Time (p_c), s	0.0	75.1	0.0	1.5	0.0	0.0	1.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	2497	0	0	1659	609	262	0	191	0	0	0
Future Volume (veh/h)	320	2497	0	0	1659	609	262	0	191	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1707	0	0	1707	1870	1870	1870	1870			
Adj Flow Rate, veh/h	348	2714	0	0	1803	0	285	0	208			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	13	0	0	13	2	2	2	2			
Cap, veh/h	369	2542	0	0	3104		514	0	229			
Arrive On Green	0.12	1.00	0.00	0.00	1.00	0.00	0.14	0.00	0.14			
Sat Flow, veh/h	1781	3329	0	0	4815	1585	3563	0	1585			
Grp Volume(v), veh/h	348	2714	0	0	1803	0	285	0	208			
Grp Sat Flow(s),veh/h/ln	1781	1622	0	0	1554	1585	1781	0	1585			
Q Serve(g_s), s	12.8	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.3			
Cycle Q Clear(g_c), s	12.8	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	369	2542	0	0	3104		514	0	229			
V/C Ratio(X)	0.94	1.07	0.00	0.00	0.58		0.55	0.00	0.91			
Avail Cap(c_a), veh/h	496	2542	0	0	3104		730	0	325			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.09	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.4	0.0	0.0	0.0	0.0	0.0	71.6	0.0	75.9			
Incr Delay (d2), s/veh	3.4	31.5	0.0	0.0	0.1	0.0	0.3	0.0	18.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.1	11.1	0.0	0.0	0.0	0.0	6.0	0.0	10.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	31.5	0.0	0.0	0.1	0.0	72.0	0.0	94.3			
LnGrp LOS	C	F	A	A	A		E	A	F			
Approach Vol, veh/h		3062			1803	A		493				
Approach Delay, s/veh		30.4			0.1			81.4				
Approach LOS		C			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		147.9			21.2	126.8		32.1				
Change Period (Y+Rc), s		6.9			5.5	6.9		6.1				
Max Green Setting (Gmax), s		130.1			28.5	96.1		36.9				
Max Q Clear Time (g_c+I1), s		2.0			14.8	2.0		25.3				
Green Ext Time (p_c), s		120.2			0.9	53.9		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	397	723	48	217	37	510	446	40	60	640	403
Future Volume (veh/h)	425	397	723	48	217	37	510	446	40	60	640	403
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	457	427	0	52	233	40	548	480	43	65	688	433
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	367	390		167	281	238	499	800	678	380	635	948
Arrive On Green	0.11	0.21	0.00	0.05	0.15	0.15	0.14	0.43	0.43	0.05	0.34	0.34
Sat Flow, veh/h	3483	1885	1598	1795	1885	1598	3456	1870	1585	1795	1885	2812
Grp Volume(v), veh/h	457	427	0	52	233	40	548	480	43	65	688	433
Grp Sat Flow(s),veh/h/ln	1742	1885	1598	1795	1885	1598	1728	1870	1585	1795	1885	1406
Q Serve(g_s), s	9.5	18.6	0.0	0.0	10.8	1.5	13.0	17.8	1.0	2.1	30.3	7.0
Cycle Q Clear(g_c), s	9.5	18.6	0.0	0.0	10.8	1.5	13.0	17.8	1.0	2.1	30.3	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	390		167	281	238	499	800	678	380	635	948
V/C Ratio(X)	1.25	1.10		0.31	0.83	0.17	1.10	0.60	0.06	0.17	1.08	0.46
Avail Cap(c_a), veh/h	367	390		204	375	318	499	800	678	404	635	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	35.7	0.0	40.7	37.2	20.3	38.5	19.8	7.2	17.9	29.8	9.7
Incr Delay (d2), s/veh	121.0	59.9	0.0	1.0	11.2	0.3	47.4	0.3	0.0	0.2	60.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	14.5	0.0	1.1	5.7	0.8	8.5	7.0	0.5	0.8	23.1	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.3	95.6	0.0	41.8	48.4	20.6	85.9	20.1	7.2	18.1	90.0	11.3
LnGrp LOS	F	F		D	D	C	F	C	A	B	F	B
Approach Vol, veh/h		884	A		325			1071			1186	
Approach Delay, s/veh		129.6			43.9			53.3			57.3	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	44.1	10.5	24.6	19.0	35.9	15.6	19.5
Change Period (Y+Rc), s	6.0	* 5.6	6.1	* 6	6.0	* 5.6	* 6.1	* 6.1
Max Green Setting (Gmax), s	6.3	* 36	6.2	* 19	13.0	* 29	* 6.5	* 18
Max Q Clear Time (g_c+I1), s	4.1	19.8	2.0	20.6	15.0	32.3	11.5	12.8
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	73.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	16.2

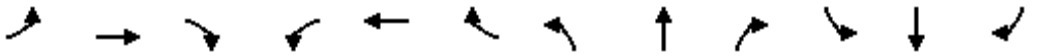
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	0	23	13	0	67	23	779	16	89	1035	30
Future Vol, veh/h	32	0	23	13	0	67	23	779	16	89	1035	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	65	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	1	1	0
Mvmt Flow	36	0	26	14	0	74	26	866	18	99	1150	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2312	2284	1150	2296	2299	866	1183	0	0	884	0	0
Stage 1	1348	1348	-	918	918	-	-	-	-	-	-	-
Stage 2	964	936	-	1378	1381	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 27	40	244	27	39	353	597	-	-	770	-	-
Stage 1	188	221	-	326	353	-	-	-	-	-	-	-
Stage 2	309	346	-	179	213	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 19	33	244	21	32	353	597	-	-	770	-	-
Mov Cap-2 Maneuver	~ 19	33	-	21	32	-	-	-	-	-	-	-
Stage 1	180	192	-	312	337	-	-	-	-	-	-	-
Stage 2	233	331	-	140	186	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 495.1	71.4	0.3	0.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	597	-	-	19	244	21	353	770	-	-
HCM Lane V/C Ratio	0.043	-	-	1.871	0.105	0.688	0.211	0.128	-	-
HCM Control Delay (s)	11.3	-	-	$ 835.5	21.5	$ 347	17.9	10.4	-	-
HCM Lane LOS	B	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.8	0.3	2	0.8	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	71	24	296	57	292	19	493	360	424	518	142
Future Volume (veh/h)	176	71	24	296	57	292	19	493	360	424	518	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	196	79	27	329	63	324	21	548	400	471	576	158
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	329	577	489	403	577	489	363	821	695	529	1179	999
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.43	0.43	0.43	0.15	0.62	0.62
Sat Flow, veh/h	1012	1900	1610	1308	1900	1610	734	1900	1610	3510	1900	1610
Grp Volume(v), veh/h	196	79	27	329	63	324	21	548	400	471	576	158
Grp Sat Flow(s),veh/h/ln	1012	1900	1610	1308	1900	1610	734	1900	1610	1755	1900	1610
Q Serve(g_s), s	27.3	4.8	1.9	38.6	3.8	27.7	2.6	36.4	29.7	20.8	26.1	6.5
Cycle Q Clear(g_c), s	31.1	4.8	1.9	43.3	3.8	27.7	2.6	36.4	29.7	20.8	26.1	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	577	489	403	577	489	363	821	695	529	1179	999
V/C Ratio(X)	0.60	0.14	0.06	0.82	0.11	0.66	0.06	0.67	0.58	0.89	0.49	0.16
Avail Cap(c_a), veh/h	470	842	714	586	842	714	363	821	695	645	1179	999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	40.0	39.0	55.7	39.6	48.0	26.2	35.8	33.9	65.8	16.3	12.6
Incr Delay (d2), s/veh	1.7	0.1	0.0	5.8	0.1	1.5	0.3	4.3	3.4	12.8	1.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	2.3	0.8	13.3	1.8	11.3	0.5	17.4	12.0	10.4	12.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	40.1	39.0	61.5	39.7	49.5	26.5	40.1	37.4	78.6	17.8	13.0
LnGrp LOS	D	D	D	E	D	D	C	D	D	E	B	B
Approach Vol, veh/h		302			716			969			1205	
Approach Delay, s/veh		48.1			54.2			38.7			40.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.8	74.2		53.9		104.0		53.9				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	29.0	63.0		70.0		98.0		70.0				
Max Q Clear Time (g_c+I1), s	22.8	38.4		33.1		28.1		45.3				
Green Ext Time (p_c), s	1.0	5.0		1.6		5.4		2.6				

Intersection Summary			
HCM 6th Ctrl Delay		43.9	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	1184	0	39	913	177	0	92	34	325	524	201
Future Volume (veh/h)	127	1184	0	39	913	177	0	92	34	325	524	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	1316	0	43	1014	197	0	102	38	361	582	223
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	259	1415	0	168	1299	580	0	325	276	467	694	588
Arrive On Green	0.07	0.39	0.00	0.04	0.36	0.36	0.00	0.17	0.17	0.13	0.37	0.37
Sat Flow, veh/h	1810	3705	0	1810	3610	1610	0	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	141	1316	0	43	1014	197	0	102	38	361	582	223
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	1805	1610	0	1900	1610	1810	1900	1610
Q Serve(g_s), s	4.2	30.5	0.0	1.3	21.9	7.8	0.0	4.1	1.8	11.0	24.5	8.9
Cycle Q Clear(g_c), s	4.2	30.5	0.0	1.3	21.9	7.8	0.0	4.1	1.8	11.0	24.5	8.9
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	1415	0	168	1299	580	0	325	276	467	694	588
V/C Ratio(X)	0.54	0.93	0.00	0.26	0.78	0.34	0.00	0.31	0.14	0.77	0.84	0.38
Avail Cap(c_a), veh/h	278	1443	0	204	1360	607	0	325	276	467	694	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	25.5	0.0	21.2	24.9	20.4	0.0	31.8	30.8	27.3	25.4	20.5
Incr Delay (d2), s/veh	1.9	10.8	0.0	0.8	2.9	0.3	0.0	0.5	0.2	7.8	11.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	13.8	0.0	0.5	9.0	2.7	0.0	1.8	0.7	2.3	12.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	36.3	0.0	22.0	27.8	20.8	0.0	32.3	31.0	35.1	37.0	22.3
LnGrp LOS	C	D	A	C	C	C	A	C	C	D	D	C
Approach Vol, veh/h		1457			1254			140			1166	
Approach Delay, s/veh		34.9			26.5			32.0			33.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	17.0	21.0	9.2	40.3		38.0	12.0	37.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	15.0	5.0	35.0		32.0	7.0	33.0
Max Q Clear Time (g_c+I1), s	13.0	6.1	3.3	32.5		26.5	6.2	23.9
Green Ext Time (p_c), s	0.0	0.3	0.0	1.8		2.0	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	0	46	25	0	2	48	818	41	2	1041	32
Future Vol, veh/h	27	0	46	25	0	2	48	818	41	2	1041	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	0	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	30	0	51	28	0	2	53	909	46	2	1157	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2200	2222	1157	2220	2212	909	1193	0	0	955	0	0
Stage 1	1161	1161	-	1015	1015	-	-	-	-	-	-	-
Stage 2	1039	1061	-	1205	1197	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	33	44	241	31	45	336	592	-	-	728	-	-
Stage 1	240	272	-	290	318	-	-	-	-	-	-	-
Stage 2	281	303	-	227	261	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	30	40	241	~ 23	41	336	592	-	-	728	-	-
Mov Cap-2 Maneuver	30	40	-	~ 23	41	-	-	-	-	-	-	-
Stage 1	218	270	-	264	289	-	-	-	-	-	-	-
Stage 2	254	276	-	177	259	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	147.2	$ 467.5	0.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	592	-	-	30	241	23	336	728	-	-
HCM Lane V/C Ratio	0.09	-	-	1	0.212	1.208	0.007	0.003	-	-
HCM Control Delay (s)	11.7	-	-	$ 357.4	23.9	$ 503.6	15.8	10	0	-
HCM Lane LOS	B	-	-	F	C	F	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	3.4	0.8	3.5	0	0	-	-

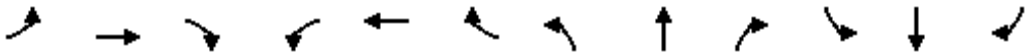
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	2062	1094	77	1323	61	884	28	150	70	27	188
Future Volume (vph)	165	2062	1094	77	1323	61	884	28	150	70	27	188
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	5.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.4	18.4	12.0	18.4	18.4	11.0	14.3	14.3	14.0	14.0	14.0
Total Split (s)	21.0	109.0	109.0	12.0	100.0	100.0	34.0	59.0	59.0	25.0	25.0	25.0
Total Split (%)	11.7%	60.6%	60.6%	6.7%	55.6%	55.6%	18.9%	32.8%	32.8%	13.9%	13.9%	13.9%
Yellow Time (s)	3.2	4.4	4.4	3.0	4.4	4.4	4.0	3.8	3.8	3.5	3.5	3.5
All-Red Time (s)	1.8	1.9	1.9	2.5	1.9	1.9	2.0	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	6.3	5.5	6.3	6.3	6.0	6.3	6.3	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	118.2	105.9	105.9	110.5	102.0	102.0	27.9	48.3	48.3	14.7	14.7	14.7
Actuated g/C Ratio	0.66	0.59	0.59	0.61	0.57	0.57	0.16	0.27	0.27	0.08	0.08	0.08
v/c Ratio	0.64	0.89	1.00	0.66	0.59	0.07	0.92	0.06	0.32	0.66	0.19	0.82
Control Delay	17.6	41.1	42.0	60.8	25.2	1.8	89.4	47.5	24.7	105.7	77.9	57.2
Queue Delay	0.0	46.7	36.5	0.0	0.5	0.0	47.4	0.0	46.4	536.3	0.0	66.5
Total Delay	17.6	87.7	78.5	60.8	25.7	1.8	136.9	47.5	71.1	642.0	77.9	123.7
LOS	B	F	E	E	C	A	F	D	E	F	E	F
Approach Delay		81.2			26.5			125.3			246.8	
Approach LOS		F			C			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 83.5	Intersection LOS: F
Intersection Capacity Utilization 94.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Davidson Pkwy & SR 138/Stockbridge Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	172	2148	1140	80	1378	64	921	29	156	73	28	196
v/c Ratio	0.64	0.89	1.00	0.66	0.59	0.07	0.92	0.06	0.32	0.66	0.19	0.82
Control Delay	17.6	41.1	42.0	60.8	25.2	1.8	89.4	47.5	24.7	105.7	77.9	57.2
Queue Delay	0.0	46.7	36.5	0.0	0.5	0.0	47.4	0.0	46.4	536.3	0.0	66.5
Total Delay	17.6	87.7	78.5	60.8	25.7	1.8	136.9	47.5	71.1	642.0	77.9	123.7
Queue Length 50th (ft)	76	882	~1025	30	557	2	299	26	66	85	31	90
Queue Length 95th (ft)	m99	951	m#1302	m#136	631	m16	#355	54	132	144	67	187
Internal Link Dist (ft)		432			495			439			264	
Turn Bay Length (ft)	75		165	125								
Base Capacity (vph)	304	2421	1142	121	2332	948	1001	545	522	145	196	274
Starvation Cap Reductn	0	776	219	0	483	0	0	0	0	0	0	0
Spillback Cap Reductn	0	109	0	0	0	0	355	0	370	144	0	131
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	1.31	1.24	0.66	0.75	0.07	1.43	0.05	1.03	73.00	0.14	1.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

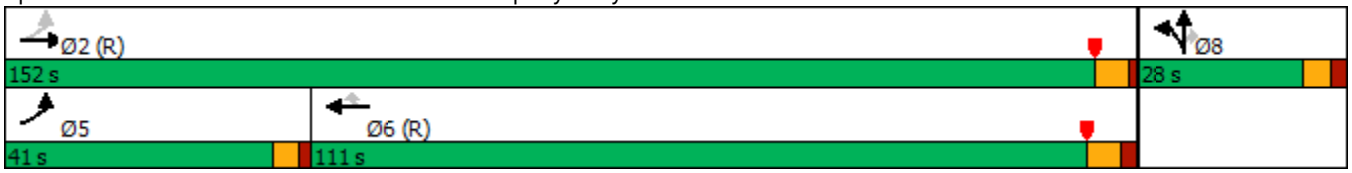
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	491	3126	2084	394	0	235
Future Volume (vph)	491	3126	2084	394	0	235
Turn Type	pm+pt	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0
Minimum Split (s)	12.0	18.5	19.0	19.0	14.1	14.1
Total Split (s)	41.0	152.0	111.0	111.0	28.0	28.0
Total Split (%)	22.8%	84.4%	61.7%	61.7%	15.6%	15.6%
Yellow Time (s)	3.3	4.5	4.5	4.5	3.6	3.6
All-Red Time (s)	1.7	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	7.0	7.0	6.1	6.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	151.5	150.5	104.0	104.0	17.4	17.4
Actuated g/C Ratio	0.84	0.84	0.58	0.58	0.10	0.10
v/c Ratio	1.16	0.95	0.91	0.40	0.40	0.77
Control Delay	148.0	12.1	33.3	6.9	82.4	76.9
Queue Delay	0.0	44.9	45.9	1.5	0.0	0.3
Total Delay	148.0	56.9	79.2	8.4	82.4	77.3
LOS	F	E	E	A	F	E
Approach Delay		69.3	67.9		78.4	
Approach LOS		E	E		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 126 (70%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 69.2	Intersection LOS: E
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: I-675 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	511	3256	2171	410	69	245
v/c Ratio	1.16	0.95	0.91	0.40	0.40	0.77
Control Delay	148.0	12.1	33.3	6.9	82.4	76.9
Queue Delay	0.0	44.9	45.9	1.5	0.0	0.3
Total Delay	148.0	56.9	79.2	8.4	82.4	77.3
Queue Length 50th (ft)	~675	339	618	31	78	126
Queue Length 95th (ft)	m#878	355	768	m227	132	181
Internal Link Dist (ft)		736	432		917	
Turn Bay Length (ft)	145					
Base Capacity (vph)	440	3441	2378	1028	215	387
Starvation Cap Reductn	0	0	588	425	0	0
Spillback Cap Reductn	0	1077	0	0	0	14
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.16	1.38	1.21	0.68	0.32	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

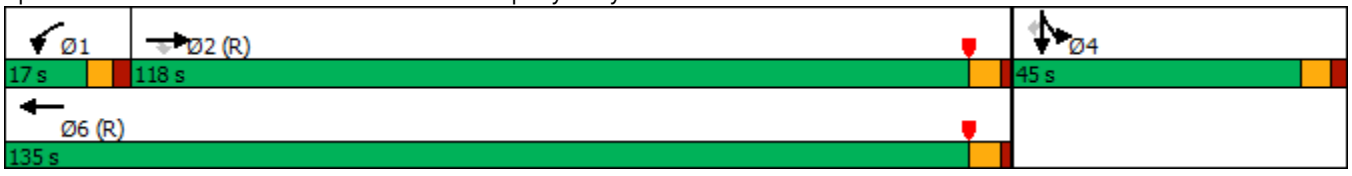
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

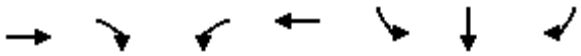
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2848	80	354	1795	798	0	795
Future Volume (vph)	2848	80	354	1795	798	0	795
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	6.0	12.0	8.0	8.0	8.0
Minimum Split (s)	18.4	18.4	12.0	18.4	14.5	14.5	14.5
Total Split (s)	118.0	118.0	17.0	135.0	45.0	45.0	45.0
Total Split (%)	65.6%	65.6%	9.4%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.4	4.4	3.4	4.4	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	2.5	1.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	112.1	112.1	11.1	129.1	38.5	38.5	38.5
Actuated g/C Ratio	0.62	0.62	0.06	0.72	0.21	0.21	0.21
v/c Ratio	0.91	0.10	1.73	0.90	0.80	0.79	1.38
Control Delay	24.1	7.8	380.4	25.2	77.1	84.1	228.8
Queue Delay	30.0	0.0	0.0	41.8	0.0	0.0	0.0
Total Delay	54.1	7.8	380.4	67.0	77.1	84.1	228.8
LOS	D	A	F	E	E	F	F
Approach Delay	52.9			118.6		154.0	
Approach LOS	D			F		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 116 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.73	
Intersection Signal Delay: 98.2	Intersection LOS: F
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: I-675 SB & SR 138/Lake Spivey Pkwy





Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2936	82	365	1851	551	272	820
v/c Ratio	0.91	0.10	1.73	0.90	0.80	0.79	1.38
Control Delay	24.1	7.8	380.4	25.2	77.1	84.1	228.8
Queue Delay	30.0	0.0	0.0	41.8	0.0	0.0	0.0
Total Delay	54.1	7.8	380.4	67.0	77.1	84.1	228.8
Queue Length 50th (ft)	488	13	~334	560	343	338	~725
Queue Length 95th (ft)	m363	m13	m#381	429	423	#489	#875
Internal Link Dist (ft)	603			736		920	
Turn Bay Length (ft)			95		475		
Base Capacity (vph)	3230	819	211	2054	688	344	596
Starvation Cap Reductn	470	0	0	0	0	0	0
Spillback Cap Reductn	38	0	0	356	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.10	1.73	1.09	0.80	0.79	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

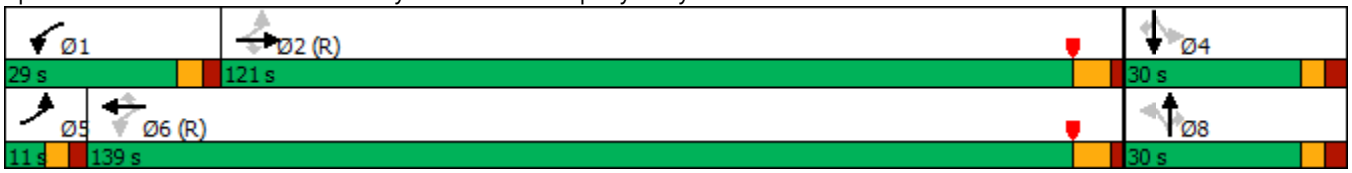
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

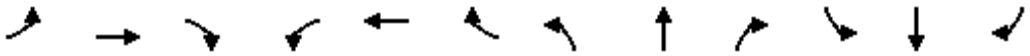
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	2528	47	197	2175	95	65	23	197	85	17	46
Future Volume (vph)	45	2528	47	197	2175	95	65	23	197	85	17	46
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	12.0	12.0	4.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	19.0	19.0	10.0	19.0	19.0	14.4	14.4	14.4	14.4	14.4	14.4
Total Split (s)	11.0	121.0	121.0	29.0	139.0	139.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	6.1%	67.2%	67.2%	16.1%	77.2%	77.2%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	3.1	5.0	5.0	3.5	5.0	5.0	3.1	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	2.5	1.9	1.9	2.5	1.9	1.9	3.3	3.3	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.9	6.9	6.0	6.9	6.9	6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	129.9	123.3	123.3	150.0	140.2	140.2	17.6	17.6	17.6	17.6	17.6	17.6
Actuated g/C Ratio	0.72	0.68	0.68	0.83	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.44	1.20	0.04	0.86	0.91	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	26.1	115.4	0.0	56.6	20.2	4.3	88.6	73.4	37.3	100.2	72.5	1.9
Queue Delay	0.0	0.0	0.0	0.0	45.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	115.4	0.0	56.6	65.8	4.3	88.6	73.4	37.3	100.2	72.5	1.9
LOS	C	F	A	E	E	A	F	E	D	F	E	A
Approach Delay		111.8			62.7			52.0			66.5	
Approach LOS		F			E			D			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 145 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 180	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 85.6	Intersection LOS: F
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: Hannover Pkwy & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	2633	49	205	2266	99	68	24	205	89	18	48
v/c Ratio	0.44	1.20	0.04	0.86	0.91	0.08	0.50	0.13	0.71	0.66	0.10	0.20
Control Delay	26.1	115.4	0.0	56.6	20.2	4.3	88.6	73.4	37.3	100.2	72.5	1.9
Queue Delay	0.0	0.0	0.0	0.0	45.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	115.4	0.0	56.6	65.8	4.3	88.6	73.4	37.3	100.2	72.5	1.9
Queue Length 50th (ft)	6	~1994	0	186	960	13	78	26	65	103	20	0
Queue Length 95th (ft)	m11	#2193	m0	m188	m1022	m12	132	58	160	165	47	0
Internal Link Dist (ft)		1279			603			221			320	
Turn Bay Length (ft)	135		480	125		100	165		175	175		175
Base Capacity (vph)	109	2188	1112	270	2488	1245	182	244	335	181	244	289
Starvation Cap Reductn	0	0	0	0	439	0	0	0	0	0	0	0
Spillback Cap Reductn	0	26	0	0	0	0	0	0	1	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.22	0.04	0.76	1.11	0.08	0.37	0.10	0.61	0.49	0.07	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	239	2060	168	47	1739	434	148	87	442	79	237
Future Volume (vph)	239	2060	168	47	1739	434	148	87	442	79	237
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases	2		2	6		6	8				4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	12.0	12.0	6.0	12.0	12.0	6.0	8.0	6.0	8.0	8.0
Minimum Split (s)	12.3	18.4	18.4	11.5	18.4	18.4	12.0	15.1	12.0	15.1	15.1
Total Split (s)	24.0	102.4	102.4	11.6	90.0	90.0	21.0	26.0	40.0	45.0	45.0
Total Split (%)	13.3%	56.9%	56.9%	6.4%	50.0%	50.0%	11.7%	14.4%	22.2%	25.0%	25.0%
Yellow Time (s)	3.8	4.8	4.8	3.0	4.8	4.8	3.5	4.6	3.5	4.6	4.6
All-Red Time (s)	2.5	1.6	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.5	6.4	6.4	6.0	7.1	6.0	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	113.1	103.4	103.4	91.0	83.6	83.6	33.7	18.1	29.4	33.0	33.0
Actuated g/C Ratio	0.63	0.57	0.57	0.51	0.46	0.46	0.19	0.10	0.16	0.18	0.18
v/c Ratio	0.95	0.83	0.19	0.48	1.25	0.55	0.56	0.73	0.84	0.25	0.59
Control Delay	72.7	29.0	6.9	29.8	151.6	18.5	57.4	94.1	86.9	63.3	27.7
Queue Delay	0.0	47.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0	0.0	0.0
Total Delay	72.7	76.0	6.9	29.8	151.6	18.5	57.4	94.3	88.9	63.3	27.7
LOS	E	E	A	C	F	B	E	F	F	E	C
Approach Delay		71.0			123.0			74.5		67.1	
Approach LOS		E			F			E		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 110 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 90.8	Intersection LOS: F
Intersection Capacity Utilization 102.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: SR 138/Lake Spivey Pkwy & Mt Zion Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	254	2191	179	50	1850	462	157	136	470	84	252
v/c Ratio	0.95	0.83	0.19	0.48	1.25	0.55	0.56	0.73	0.84	0.25	0.59
Control Delay	72.7	29.0	6.9	29.8	151.6	18.5	57.4	94.1	86.9	63.3	27.7
Queue Delay	0.0	47.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0	0.0	0.0
Total Delay	72.7	76.0	6.9	29.8	151.6	18.5	57.4	94.3	88.9	63.3	27.7
Queue Length 50th (ft)	~271	739	22	22	~1421	123	140	145	281	85	91
Queue Length 95th (ft)	m#297	m647	m28	m29	#1551	m197	203	#239	339	139	190
Internal Link Dist (ft)		930			1279			566		511	
Turn Bay Length (ft)	115			155					345		165
Base Capacity (vph)	268	2636	965	105	1483	839	286	201	648	392	464
Starvation Cap Reductn	0	119	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	762	0	0	0	0	0	2	76	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	1.17	0.19	0.48	1.25	0.55	0.55	0.68	0.82	0.21	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

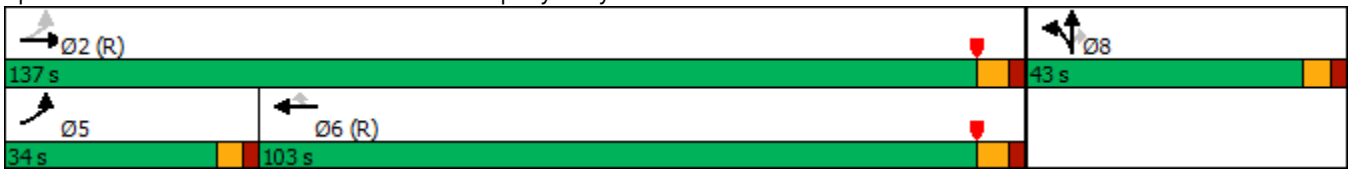
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	320	2497	1659	609	262	0	191
Future Volume (vph)	320	2497	1659	609	262	0	191
Turn Type	pm+pt	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases	2			6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	6.0	12.0	12.0	12.0	8.0	8.0	8.0
Minimum Split (s)	12.0	18.9	18.9	18.9	14.1	14.1	14.1
Total Split (s)	34.0	137.0	103.0	103.0	43.0	43.0	43.0
Total Split (%)	18.9%	76.1%	57.2%	57.2%	23.9%	23.9%	23.9%
Yellow Time (s)	3.3	4.4	4.4	4.4	3.6	3.6	3.6
All-Red Time (s)	2.2	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.9	6.9	6.9	6.1	6.1	6.1
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	146.2	144.8	103.5	103.5	22.2	22.2	22.2
Actuated g/C Ratio	0.81	0.80	0.58	0.58	0.12	0.12	0.12
v/c Ratio	0.80	1.06	0.68	0.60	0.69	0.69	0.85
Control Delay	42.5	56.0	9.0	0.5	91.3	91.7	83.8
Queue Delay	0.0	19.0	19.3	0.7	0.5	0.5	0.0
Total Delay	42.5	74.9	28.3	1.2	91.8	92.1	83.8
LOS	D	E	C	A	F	F	F
Approach Delay		71.2	21.0			88.5	
Approach LOS		E	C			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 144 (80%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 170	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 52.1	Intersection LOS: D
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 16: I-75 NB & SR 138/Lake Spivey Pkwy





Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	348	2714	1803	662	142	143	208
v/c Ratio	0.80	1.06	0.68	0.60	0.69	0.69	0.85
Control Delay	42.5	56.0	9.0	0.5	91.3	91.7	83.8
Queue Delay	0.0	19.0	19.3	0.7	0.5	0.5	0.0
Total Delay	42.5	74.9	28.3	1.2	91.8	92.1	83.8
Queue Length 50th (ft)	299	~1830	182	1	171	173	180
Queue Length 95th (ft)	m270	m#1364	m251	m2	245	246	269
Internal Link Dist (ft)		872	930			821	
Turn Bay Length (ft)	140						515
Base Capacity (vph)	433	2570	2639	1111	344	344	369
Starvation Cap Reductn	0	451	0	176	0	0	0
Spillback Cap Reductn	0	22	885	0	42	42	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.28	1.03	0.71	0.47	0.47	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

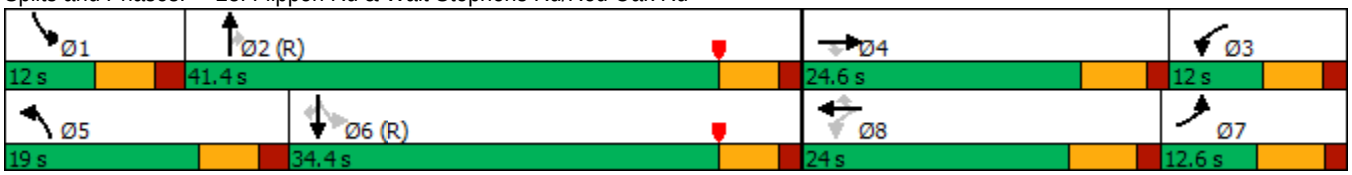
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

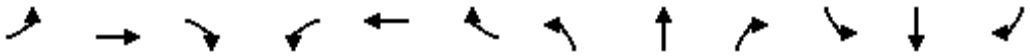
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	425	397	723	48	217	37	510	446	40	60	640	403
Future Volume (vph)	425	397	723	48	217	37	510	446	40	60	640	403
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	8.0	8.0	6.0	8.0	8.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	12.5	24.0	24.0	12.0	24.0	24.0	12.0	24.0	24.0	12.0	24.0	24.0
Total Split (s)	12.6	24.6	24.6	12.0	24.0	24.0	19.0	41.4	41.4	12.0	34.4	34.4
Total Split (%)	14.0%	27.3%	27.3%	13.3%	26.7%	26.7%	21.1%	46.0%	46.0%	13.3%	38.2%	38.2%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.6	1.5	1.5	1.8	1.6	1.6	2.0	1.6	1.6	2.0	1.6	1.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.0	6.0	5.8	6.1	6.1	6.0	5.6	5.6	6.0	5.6	5.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	9.1	23.4	23.4	21.7	15.3	15.3	13.0	38.2	38.2	34.4	28.8	28.8
Actuated g/C Ratio	0.10	0.26	0.26	0.24	0.17	0.17	0.14	0.42	0.42	0.38	0.32	0.32
v/c Ratio	1.31	0.88	1.20	0.25	0.73	0.08	1.11	0.61	0.06	0.19	1.14	0.36
Control Delay	192.4	55.4	124.1	26.6	48.8	0.4	111.4	10.7	0.1	13.0	114.2	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.4	55.4	124.1	26.6	48.8	0.4	111.4	10.7	0.1	13.0	114.2	3.3
LOS	F	E	F	C	D	A	F	B	A	B	F	A
Approach Delay		125.2			39.3			61.8			68.1	
Approach LOS		F			D			E			E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 86.7	Intersection LOS: F
Intersection Capacity Utilization 98.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Flippen Rd & Walt Stephens Rd/Red Oak Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	457	427	777	52	233	40	548	480	43	65	688	433
v/c Ratio	1.31	0.88	1.20	0.25	0.73	0.08	1.11	0.61	0.06	0.19	1.14	0.36
Control Delay	192.4	55.4	124.1	26.6	48.8	0.4	111.4	10.7	0.1	13.0	114.2	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.4	55.4	124.1	26.6	48.8	0.4	111.4	10.7	0.1	13.0	114.2	3.3
Queue Length 50th (ft)	~185	~278	~430	20	125	0	~177	96	0	17	~463	0
Queue Length 95th (ft)	#299	#458	#654	45	199	0	m#204	m130	m0	37	#674	34
Internal Link Dist (ft)		1944			3175			1869			1330	
Turn Bay Length (ft)	180		300	110			115			105		935
Base Capacity (vph)	350	488	649	208	374	519	495	791	777	340	601	1194
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.31	0.88	1.20	0.25	0.62	0.08	1.11	0.61	0.06	0.19	1.14	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

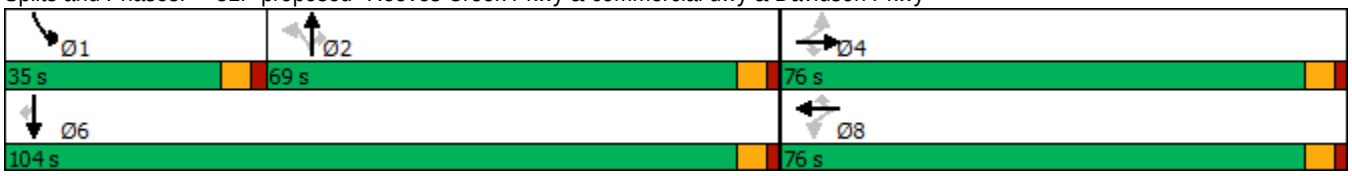
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

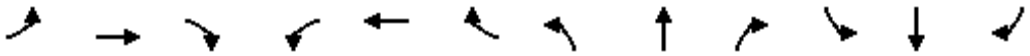
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	71	24	296	57	292	19	493	360	424	518	142
Future Volume (vph)	176	71	24	296	57	292	19	493	360	424	518	142
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8		8	2		2			6
Detector Phase	4	4	4	8	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	76.0	76.0	76.0	76.0	76.0	76.0	69.0	69.0	69.0	35.0	104.0	104.0
Total Split (%)	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%	38.3%	38.3%	38.3%	19.4%	57.8%	57.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	43.7	43.7	43.7	43.7	43.7	43.7	67.6	67.6	67.6	24.9	98.5	98.5
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.28	0.44	0.44	0.44	0.16	0.64	0.64
v/c Ratio	0.51	0.15	0.05	0.87	0.12	0.47	0.06	0.66	0.47	0.84	0.47	0.15
Control Delay	50.3	40.5	0.7	74.6	39.9	5.9	31.8	42.2	14.8	77.2	17.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	40.5	0.7	74.6	39.9	5.9	31.8	42.2	14.8	77.2	17.9	3.7
LOS	D	D	A	E	D	A	C	D	B	E	B	A
Approach Delay		43.3			40.5			30.6			39.2	
Approach LOS		D			D			C			D	

Intersection Summary		
Cycle Length: 180		
Actuated Cycle Length: 154.3		
Natural Cycle: 75		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.87		
Intersection Signal Delay: 37.3	Intersection LOS: D	
Intersection Capacity Utilization 76.1%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 31: *proposed* Reeves Creek Pkwy & commercial dwy & Davidson Pkwy





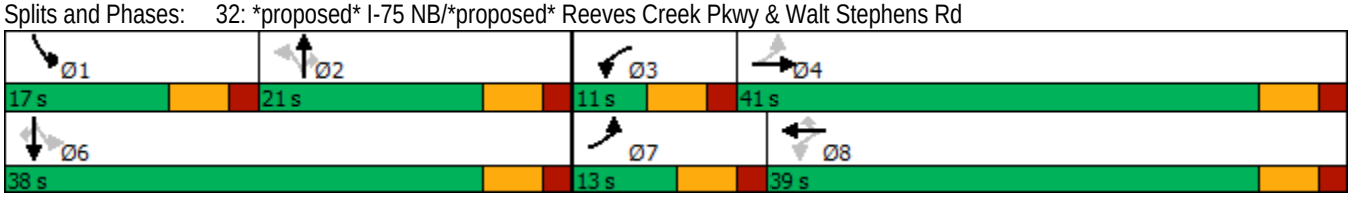
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	79	27	329	63	324	21	548	400	471	576	158
v/c Ratio	0.51	0.15	0.05	0.87	0.12	0.47	0.06	0.66	0.47	0.84	0.47	0.15
Control Delay	50.3	40.5	0.7	74.6	39.9	5.9	31.8	42.2	14.8	77.2	17.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	40.5	0.7	74.6	39.9	5.9	31.8	42.2	14.8	77.2	17.9	3.7
Queue Length 50th (ft)	165	60	0	315	47	0	12	437	102	238	287	9
Queue Length 95th (ft)	244	102	3	440	85	68	38	711	241	334	502	48
Internal Link Dist (ft)		467			910			658			1599	
Turn Bay Length (ft)												
Base Capacity (vph)	620	866	766	611	866	912	373	832	846	661	1213	1078
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.09	0.04	0.54	0.07	0.36	0.06	0.66	0.47	0.71	0.47	0.15

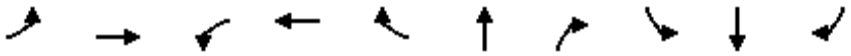
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	127	1184	39	913	177	92	34	325	524	201
Future Volume (vph)	127	1184	39	913	177	92	34	325	524	201
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2		1	6	
Permitted Phases	4		8		8		2	6		6
Detector Phase	7	4	3	8	8	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	20.0	20.0	11.0	20.0	20.0
Total Split (s)	13.0	41.0	11.0	39.0	39.0	21.0	21.0	17.0	38.0	38.0
Total Split (%)	14.4%	45.6%	12.2%	43.3%	43.3%	23.3%	23.3%	18.9%	42.2%	42.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	None	Max	Max
Act Effct Green (s)	40.7	36.6	35.0	30.0	30.0	15.0	15.0	32.1	32.1	32.1
Actuated g/C Ratio	0.47	0.42	0.40	0.34	0.34	0.17	0.17	0.37	0.37	0.37
v/c Ratio	0.62	0.87	0.23	0.82	0.29	0.31	0.09	0.79	0.83	0.32
Control Delay	27.3	31.9	14.7	32.1	4.2	35.6	0.4	38.3	38.2	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	31.9	14.7	32.1	4.2	35.6	0.4	38.3	38.2	7.7
LOS	C	C	B	C	A	D	A	D	D	A
Approach Delay		31.4		27.1		26.1			32.4	
Approach LOS		C		C		C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 32: *proposed* I-75 NB/*proposed* Reeves Creek Pkwy & Walt Stephens Rd





Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	1316	43	1014	197	102	38	361	582	223
v/c Ratio	0.62	0.87	0.23	0.82	0.29	0.31	0.09	0.79	0.83	0.32
Control Delay	27.3	31.9	14.7	32.1	4.2	35.6	0.4	38.3	38.2	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	31.9	14.7	32.1	4.2	35.6	0.4	38.3	38.2	7.7
Queue Length 50th (ft)	40	371	12	263	0	52	0	163	303	21
Queue Length 95th (ft)	#102	#516	28	340	43	99	0	#301	#493	71
Internal Link Dist (ft)		4343		1944		882			1250	
Turn Bay Length (ft)										
Base Capacity (vph)	226	1516	184	1371	735	327	429	455	699	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.87	0.23	0.74	0.27	0.31	0.09	0.79	0.83	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCS7 Two-Lane Highway Report

Project Information

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Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	618	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.36

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.5

Vehicle Results

Average Speed, mi/h	47.5	Percent Followers, %	61.8
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	8.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	618	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.87	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	679	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.4

Vehicle Results

Average Speed, mi/h	47.4	Percent Followers, %	64.3
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	9.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	679	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.92	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Project Information

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Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	727	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.43

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.3

Vehicle Results

Average Speed, mi/h	47.3	Percent Followers, %	66.1
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	10.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	727	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	967	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.57

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.9

Vehicle Results

Average Speed, mi/h	46.9	Percent Followers, %	73.7
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	15.2
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	967	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.10	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	519	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	57.4
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	6.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	519	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.78	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Project Information

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Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	381	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.2
Speed Slope Coefficient	3.17352	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37571	PF Power Coefficient	0.72746
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.3

Vehicle Results

Average Speed, mi/h	46.3	Percent Followers, %	49.4
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	4.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	381	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.10	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Project Information

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Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	593	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.9

Vehicle Results

Average Speed, mi/h	45.9	Percent Followers, %	61.0
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	7.9
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	593	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.85	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	770	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.45

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17894	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37564	PF Power Coefficient	0.72735
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.6

Vehicle Results

Average Speed, mi/h	45.6	Percent Followers, %	67.9
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	11.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	770	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.77	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	376	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.9

Vehicle Results

Average Speed, mi/h	35.9	Percent Followers, %	50.9
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	5.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	376	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.26	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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Project Information

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Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	247	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58184	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39439	PF Power Coefficient	0.68639
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.1

Vehicle Results

Average Speed, mi/h	36.1	Percent Followers, %	41.4
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	247	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.44	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	393	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.8

Vehicle Results

Average Speed, mi/h	35.8	Percent Followers, %	52.0
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	5.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	393	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.29	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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Project Information

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Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	303	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58725	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39492	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.1

Vehicle Results

Average Speed, mi/h	36.1	Percent Followers, %	45.9
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	3.9
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	303	Bicycle Effective Width, ft	24
Bicycle LOS Score	1.99	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM NB - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	459	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.5
Speed Slope Coefficient	3.18662	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37449	PF Power Coefficient	0.72838
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	54.2
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	5.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	459	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.47	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM SB - SR 42-138 to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	707	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.5
Speed Slope Coefficient	3.18662	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37449	PF Power Coefficient	0.72838
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.9

Vehicle Results

Average Speed, mi/h	45.9	Percent Followers, %	65.6
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	10.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	707	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.69	Bicycle Effective Speed Factor	4.42
Bicycle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM NB - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	674	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.6
Speed Slope Coefficient	3.19204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37440	PF Power Coefficient	0.72827
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	64.4
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	9.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	674	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.91	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM SB - SR 42-138 to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	696	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.41

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.6
Speed Slope Coefficient	3.19204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37440	PF Power Coefficient	0.72827
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	65.2
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	9.9
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	696	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.93	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM NB - SR 138 to Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	701	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.91	Total Trucks, %	23.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.41

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.0
Speed Slope Coefficient	3.16362	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37413	PF Power Coefficient	0.72958
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.5

Vehicle Results

Average Speed, mi/h	45.5	Percent Followers, %	65.4
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	10.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	701	Bicycle Effective Width, ft	24
Bicycle LOS Score	11.78	Bicycle Effective Speed Factor	4.42
Bicycle LOS	F		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM SB - Valley Hill Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	443	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	23.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.0
Speed Slope Coefficient	3.16362	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37413	PF Power Coefficient	0.72958
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	53.1
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	5.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	443	Bicycle Effective Width, ft	24
Bicycle LOS Score	11.55	Bicycle Effective Speed Factor	4.42
Bicycle LOS	F		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM NB - SR 138 to Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	650	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	23.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.38

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.0
Speed Slope Coefficient	3.16362	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37413	PF Power Coefficient	0.72958
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.6

Vehicle Results

Average Speed, mi/h	45.6	Percent Followers, %	63.3
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	9.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	650	Bicycle Effective Width, ft	24
Bicycle LOS Score	11.74	Bicycle Effective Speed Factor	4.42
Bicycle LOS	F		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM SB - Valley Hill Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	781	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.99	Total Trucks, %	23.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.46

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.0
Speed Slope Coefficient	3.16362	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37413	PF Power Coefficient	0.72958
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	68.2
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	11.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	781	Bicycle Effective Width, ft	24
Bicycle LOS Score	11.84	Bicycle Effective Speed Factor	4.42
Bicycle LOS	F		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	653	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	464
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	371	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1387	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	952
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	762	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1746	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1148
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	919	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1094	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	743
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	595	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.98
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	835	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	566
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	464	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	10.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1398	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	898
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	736	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.19
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1498	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	952
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	780	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.22
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1141	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	756
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	620	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	852	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	582
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	473	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1253	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	847
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	688	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1644	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1064
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	865	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1120	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	774
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	629	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	849	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	562
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	456	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1241	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	779
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	633	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1623	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1074
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	873	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1091	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	738
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	599	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	793	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	546
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	441	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.18
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1433	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	926
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	746	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.44
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1485	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1059
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	853	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.51
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1068	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	683
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	551	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	555	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	342
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	292	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.95
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	998	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	602
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	514	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.24
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1481	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	932
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	796	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.46
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1044	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	636
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	544	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.27
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	627	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	386
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	330	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1039	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	626
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	536	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1667	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1037
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	887	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.52
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1091	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	664
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	568	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	729	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	504
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	401	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1126	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	770
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	612	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1689	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1132
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	898	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1122	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	744
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	591	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	934	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	626
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	497	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1432	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	970
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	770	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2078	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1392
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1105	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1443	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	966
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	768	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1259	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	891
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	707	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1135	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	803
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	638	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2266	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1471
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1168	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1243	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	824
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	654	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1173	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	728
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	645	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.48
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1453	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	882
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	781	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1881	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1107
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	980	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1716	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1010
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	894	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1079	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	678
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	599	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.44
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1370	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	832
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	737	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1682	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	990
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	876	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1470	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	893
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	790	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1081	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	694
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	614	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1483	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	942
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	833	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1600	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	972
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	860	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1506	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	946
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	837	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1546	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	960
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	849	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1068	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	710
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	628	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.46
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1809	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1175
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1040	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1351	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	878
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	776	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1495	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	960
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	849	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1138	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	706
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	625	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.46
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1323	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	812
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	719	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.53
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1669	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1084
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	959	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	849	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	541
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	466	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	855	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	557
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	480	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	876	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	584
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	503	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	989	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	624
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	538	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy AM EB - SR 138 to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	158	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.8

Vehicle Results

Average Speed, mi/h	36.8	Percent Followers, %	32.4
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	158	Bicycle Effective Width, ft	29
Bicycle LOS Score	0.68	Bicycle Effective Speed Factor	3.84
Bicycle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy AM WB - SR 42-138 to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	273	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.3

Vehicle Results

Average Speed, mi/h	36.3	Percent Followers, %	43.5
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	3.3
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	273	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.29	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy PM EB - SR 138 to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	332	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.2

Vehicle Results

Average Speed, mi/h	36.2	Percent Followers, %	48.0
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	4.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	332	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.38	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy PM WB - SR 42-138 to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	297	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.3

Vehicle Results

Average Speed, mi/h	36.3	Percent Followers, %	45.4
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	3.7
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	297	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.33	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	910	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.54

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.6

Vehicle Results

Average Speed, mi/h	46.6	Percent Followers, %	72.2
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	14.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	910	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	286	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.9

Vehicle Results

Average Speed, mi/h	47.9	Percent Followers, %	42.2
Segment Travel Time, minutes	1.25	Followers Density, followers/mi/ln	2.5
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	286	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.48	Bicycle Effective Speed Factor	4.42
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	483	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.4

Vehicle Results

Average Speed, mi/h	47.4	Percent Followers, %	55.3
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	5.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	483	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.74	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	943	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.55

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.5

Vehicle Results

Average Speed, mi/h	46.5	Percent Followers, %	73.1
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	14.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	943	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	336	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.90297	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39236	PF Power Coefficient	0.71017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.6

Vehicle Results

Average Speed, mi/h	41.6	Percent Followers, %	47.4
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	3.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	336	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.70	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	246	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.57	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.89936	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39224	PF Power Coefficient	0.71020
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.9

Vehicle Results

Average Speed, mi/h	41.9	Percent Followers, %	40.2
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	2.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	246	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.71	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	198	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90839	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39254	PF Power Coefficient	0.71011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.2

Vehicle Results

Average Speed, mi/h	42.2	Percent Followers, %	35.6
Segment Travel Time, minutes	1.42	Followers Density, followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	198	Bicycle Effective Width, ft	24
Bicycle LOS Score	1.84	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	250	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90478	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39242	PF Power Coefficient	0.71015
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.9

Vehicle Results

Average Speed, mi/h	41.9	Percent Followers, %	40.6
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	2.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	250	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.34	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	205	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	37.4
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	2.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	205	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.34	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	123	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59720	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39413	PF Power Coefficient	0.68833
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	37.0

Vehicle Results

Average Speed, mi/h	37.0	Percent Followers, %	28.1
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	0.9
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	123	Bicycle Effective Width, ft	32
Bicycle LOS Score	1.09	Bicycle Effective Speed Factor	3.84
Bicycle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	342	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.3

Vehicle Results

Average Speed, mi/h	36.3	Percent Followers, %	48.6
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	4.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	342	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.60	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60803	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39515	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.9

Vehicle Results

Average Speed, mi/h	36.9	Percent Followers, %	33.6
Segment Travel Time, minutes	1.62	Followers Density, followers/mi/ln	1.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	30
Bicycle LOS Score	0.42	Bicycle Effective Speed Factor	3.84
Bicycle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM EB - Brentwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	742	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.44

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22185	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37178	PF Power Coefficient	0.73001
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	66.8
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	10.7
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	742	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.96	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM WB - Flippen Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	758	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.45

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22004	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37182	PF Power Coefficient	0.73004
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	67.4
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	11.0
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	758	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.20	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM EB - Brentwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	900	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.53

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22365	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37175	PF Power Coefficient	0.72997
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	71.9
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	14.0
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	900	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.85	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM WB - Flippen Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	585	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22365	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37175	PF Power Coefficient	0.72997
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.8

Vehicle Results

Average Speed, mi/h	46.8	Percent Followers, %	60.5
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	7.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	585	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.63	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	444	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.20152	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37358	PF Power Coefficient	0.72882
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.7

Vehicle Results

Average Speed, mi/h	46.7	Percent Followers, %	53.2
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	5.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	444	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.70	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM WB - Brentwood Pkwy to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	931	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.55

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.19972	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37361	PF Power Coefficient	0.72886
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	72.8
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	14.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	931	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.31	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1035	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.91	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.61

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	75.6
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	17.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1035	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.92	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM WB - Brentwood Pkwy to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	578	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.99	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	60.2
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	7.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	578	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.62	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	323	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.19

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	48.2

Vehicle Results

Average Speed, mi/h	48.2	Percent Followers, %	45.0
Segment Travel Time, minutes	1.24	Followers Density, followers/mi/ln	3.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	323	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.54	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	547	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.66	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.32

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.6

Vehicle Results

Average Speed, mi/h	47.6	Percent Followers, %	58.5
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	6.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	547	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.81	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	514	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.7

Vehicle Results

Average Speed, mi/h	47.7	Percent Followers, %	56.8
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	6.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	514	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.77	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2019
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	347	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	48.2

Vehicle Results

Average Speed, mi/h	48.2	Percent Followers, %	46.7
Segment Travel Time, minutes	1.25	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	347	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.58	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	753	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.44

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.2

Vehicle Results

Average Speed, mi/h	47.2	Percent Followers, %	67.1
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	10.7
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	753	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.97	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	826	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	69.5
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	12.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	826	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.02	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	886	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	71.4
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	13.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	886	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.05	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1176	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.69

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.6

Vehicle Results

Average Speed, mi/h	46.6	Percent Followers, %	78.6
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	19.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1176	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.19	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	631	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.37

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.8

Vehicle Results

Average Speed, mi/h	45.8	Percent Followers, %	62.6
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	8.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	631	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.88	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	463	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.2
Speed Slope Coefficient	3.17352	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37571	PF Power Coefficient	0.72746
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	54.4
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	5.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	463	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.20	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	720	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	66.2
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	10.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	720	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	938	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.55

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17894	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37564	PF Power Coefficient	0.72735
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.4

Vehicle Results

Average Speed, mi/h	45.4	Percent Followers, %	73.1
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	15.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	938	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.87	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	458	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.7

Vehicle Results

Average Speed, mi/h	35.7	Percent Followers, %	55.8
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	7.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	458	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.36	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	301	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58184	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39439	PF Power Coefficient	0.68639
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.0

Vehicle Results

Average Speed, mi/h	36.0	Percent Followers, %	45.8
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	3.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	301	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.54	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	473	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.7

Vehicle Results

Average Speed, mi/h	35.7	Percent Followers, %	56.6
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	7.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	473	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.38	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	369	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58725	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39492	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.9

Vehicle Results

Average Speed, mi/h	35.9	Percent Followers, %	50.5
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	5.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	369	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.09	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	538	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	294
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	280	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.22
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	811	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	453
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	431	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.44
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	739	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	419
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	411	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	797	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	432
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	424	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	778	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	526
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	427	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.53
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	501	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	328
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	266	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.29
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	761	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	488
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	396	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.49
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	927	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	576
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	468	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	794	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	564
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	451	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1686	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1158
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	926	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.20
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2120	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1394
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1116	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.30
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1325	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	900
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	720	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.08
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1017	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	689
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	565	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1704	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1094
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	897	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.30
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1826	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1160
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	951	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1390	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	922
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	755	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.21
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1039	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	710
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	577	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1527	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1032
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	839	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2004	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1298
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1055	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1365	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	943
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	767	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1035	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	684
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	556	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1512	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	949
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	771	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1979	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1308
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1064	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1330	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	899
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	731	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.80
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	967	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	666
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	537	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.28
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1747	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1129
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	910	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1811	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1292
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1041	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1302	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	832
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	671	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.39
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	659	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	406
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	347	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.04
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1216	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	733
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	627	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.34
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1768	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1112
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	951	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1267	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	772
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	660	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	764	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	470
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	402	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1264	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	762
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	652	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2027	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1261
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1078	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1328	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	809
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	692	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.39
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	882	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	610
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	485	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1361	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	932
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	740	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2052	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1374
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1091	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1354	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	898
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	713	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1122	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	752
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	597	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1697	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1149
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	912	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2497	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1673
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1328	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1759	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1178
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	936	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1535	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1086
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	862	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1383	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	978
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	777	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2762	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1793
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.94

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	41.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1424	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.09
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1515	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1004
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	797	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.80
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1430	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	888
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	786	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1741	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1058
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	936	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2293	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1350
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1194	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2028	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1194
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1056	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1302	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	818
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	723	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.54
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1663	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1010
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	894	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2030	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1194
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1057	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1781	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1082
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	958	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1299	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	834
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	738	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1808	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1148
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1016	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1913	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1162
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1028	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1835	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1152
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1019	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1875	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1164
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1030	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1302	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	866
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	766	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2205	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1432
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1267	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1647	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1070
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	947	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1822	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	1170
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1035	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1387	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	861
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	762	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1612	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	990
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	876	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2033	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1320
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1168	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1034	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	659
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	568	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1042	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	679
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	585	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.81
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1068	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	712
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	614	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1206	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	760
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	655	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy AM EB - SR 138 to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	193	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.6

Vehicle Results

Average Speed, mi/h	36.6	Percent Followers, %	36.3
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	1.9
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	193	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.11	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy AM WB - SR 42-138 to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	333	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.2

Vehicle Results

Average Speed, mi/h	36.2	Percent Followers, %	48.1
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	4.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	333	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.39	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy PM EB - SR 138 to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	405	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.0

Vehicle Results

Average Speed, mi/h	36.0	Percent Followers, %	52.8
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	5.9
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	405	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.49	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy PM WB - SR 42-138 to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	362	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.1

Vehicle Results

Average Speed, mi/h	36.1	Percent Followers, %	50.0
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	5.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	362	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.43	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1108	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.65

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.3

Vehicle Results

Average Speed, mi/h	46.3	Percent Followers, %	77.2
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	18.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1108	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.16	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	349	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.7

Vehicle Results

Average Speed, mi/h	47.7	Percent Followers, %	47.0
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	349	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.58	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	589	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	60.5
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	7.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	589	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.84	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1149	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.68

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	78.1
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	19.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1149	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.18	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	410	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.90297	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39236	PF Power Coefficient	0.71017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.4

Vehicle Results

Average Speed, mi/h	41.4	Percent Followers, %	52.2
Segment Travel Time, minutes	1.45	Followers Density, followers/mi/ln	5.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	410	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.81	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	300	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.57	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.89936	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39224	PF Power Coefficient	0.71020
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.7

Vehicle Results

Average Speed, mi/h	41.7	Percent Followers, %	44.7
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	3.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	300	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.14	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	241	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90839	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39254	PF Power Coefficient	0.71011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	42.0

Vehicle Results

Average Speed, mi/h	42.0	Percent Followers, %	39.7
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	2.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	241	Bicycle Effective Width, ft	24
Bicycle LOS Score	1.94	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	304	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90478	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39242	PF Power Coefficient	0.71015
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.8

Vehicle Results

Average Speed, mi/h	41.8	Percent Followers, %	45.0
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	3.3
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	304	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.44	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	249	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.6

Vehicle Results

Average Speed, mi/h	36.6	Percent Followers, %	41.5
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	249	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.44	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	151	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59720	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39413	PF Power Coefficient	0.68833
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.8

Vehicle Results

Average Speed, mi/h	36.8	Percent Followers, %	31.6
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	151	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.82	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	417	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.25

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.1

Vehicle Results

Average Speed, mi/h	36.1	Percent Followers, %	53.4
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	6.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	417	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.70	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	205	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60803	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39515	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.8

Vehicle Results

Average Speed, mi/h	36.8	Percent Followers, %	37.4
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	2.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	205	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.14	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM EB - Brentwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	905	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.53

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22185	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37178	PF Power Coefficient	0.73001
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	72.1
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	14.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	905	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM WB - Flippen Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	891	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22004	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37182	PF Power Coefficient	0.73004
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	71.7
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	13.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	891	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.28	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM EB - Brentwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	1097	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.65

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22365	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37175	PF Power Coefficient	0.72997
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.9

Vehicle Results

Average Speed, mi/h	45.9	Percent Followers, %	77.0
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	18.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1097	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM WB - Flippen Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	684	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22365	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37175	PF Power Coefficient	0.72997
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.6

Vehicle Results

Average Speed, mi/h	46.6	Percent Followers, %	64.6
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	9.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	684	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.71	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	518	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.20152	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37358	PF Power Coefficient	0.72882
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.5

Vehicle Results

Average Speed, mi/h	46.5	Percent Followers, %	57.3
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	6.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	518	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.78	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM WB - Brentwood Pkwy to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1134	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.67

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.19972	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37361	PF Power Coefficient	0.72886
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.5

Vehicle Results

Average Speed, mi/h	45.5	Percent Followers, %	77.8
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	19.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1134	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.41	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1218	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.91	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.72

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.4

Vehicle Results

Average Speed, mi/h	45.4	Percent Followers, %	79.5
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	21.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1218	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.00	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM WB - Brentwood Pkwy to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	704	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.99	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.41

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	65.5
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	10.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	704	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	393	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	48.0

Vehicle Results

Average Speed, mi/h	48.0	Percent Followers, %	49.8
Segment Travel Time, minutes	1.25	Followers Density, followers/mi/ln	4.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	393	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	667	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.66	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.39

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.4

Vehicle Results

Average Speed, mi/h	47.4	Percent Followers, %	63.8
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	9.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	667	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.91	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	626	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.37

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.5

Vehicle Results

Average Speed, mi/h	47.5	Percent Followers, %	62.1
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	8.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	626	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.87	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	424	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.25

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.9

Vehicle Results

Average Speed, mi/h	47.9	Percent Followers, %	51.7
Segment Travel Time, minutes	1.25	Followers Density, followers/mi/ln	4.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	424	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.68	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	417	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	241
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	5.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	232	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	863	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	474
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	469	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.52
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	794	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	376
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	301	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2120	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	930
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	744	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.09
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1039	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	473
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	385	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.48
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2004	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	865
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	703	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1122	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	501
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	398	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.44
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2497	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1115
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	885	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1535	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	724
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	575	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2762	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1195
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	949	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	964	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	566
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	554	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.81
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	276	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.79	Flow Rate (V_p), pc/h/ln	182
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	4.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	175	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	530	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	300
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	294	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.49
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1092	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	586
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	575	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM - Brenwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	769	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	462
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.1		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	452	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM - Brenwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1064	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	554
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.1		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	548	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.60
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	964	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	578
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	567	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	697	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	356
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	352	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	848	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.50

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	70.2
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	12.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	848	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.03	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	930	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.55

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	72.7
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	14.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	930	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	999	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.59

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.9

Vehicle Results

Average Speed, mi/h	46.9	Percent Followers, %	74.5
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	15.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	999	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.11	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1323	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.78

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	23.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	81.3
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	23.2
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1323	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.25	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	710	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	65.8
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	10.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	710	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.94	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	521	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.2
Speed Slope Coefficient	3.17352	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37571	PF Power Coefficient	0.72746
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	57.5
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	6.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	521	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.26	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	809	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.48

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.5

Vehicle Results

Average Speed, mi/h	45.5	Percent Followers, %	69.3
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	12.3
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	809	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.00	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	1055	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.62

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17894	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37564	PF Power Coefficient	0.72735
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.2

Vehicle Results

Average Speed, mi/h	45.2	Percent Followers, %	76.1
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	17.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1055	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.93	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	512	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.6

Vehicle Results

Average Speed, mi/h	35.6	Percent Followers, %	58.5
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	8.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	512	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.42	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	339	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58184	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39439	PF Power Coefficient	0.68639
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.9

Vehicle Results

Average Speed, mi/h	35.9	Percent Followers, %	48.5
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	4.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	339	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.60	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	529	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	59.4
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	8.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	529	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.44	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	416	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58725	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39492	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.8

Vehicle Results

Average Speed, mi/h	35.8	Percent Followers, %	53.4
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	6.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	416	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.15	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	604	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	330
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	315	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.28
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	912	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	510
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	485	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	832	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	472
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	462	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	897	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	487
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	477	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	876	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	592
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	481	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.59
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	562	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	368
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	299	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.35
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	856	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	548
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	446	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1035	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	643
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	523	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	893	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	634
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	507	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1895	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1302
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1041	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.26
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2383	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1568
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	40.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1254	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1489	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1012
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	809	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.14
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1147	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	777
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	637	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.12
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1919	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1232
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1010	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2056	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1306
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1071	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.39
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1567	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1038
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	852	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.27
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1170	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	800
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	650	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1720	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1162
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	945	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2256	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1460
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	41.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1187	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.05
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2025
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1537	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1062
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	863	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1165	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	770
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	626	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1703	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1068
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	869	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2228	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1474
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	38.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1198	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.05
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1498	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1012
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	823	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1089	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	750
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	605	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.34
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1967	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1271
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1024	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2039	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1454
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1172	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1466	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	938
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	756	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	732	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	450
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	385	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.09
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1368	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	824
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	705	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.40
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1968	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1238
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1058	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1424	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	868
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	742	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.43
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	860	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	530
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	453	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.18
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1422	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	858
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	733	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.42
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2280	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1418
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1213	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1494	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	910
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	778	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	990	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	685
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	544	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.60
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1526	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1044
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	829	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2309	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1547
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1228	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.02
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1518	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1006
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	799	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.80
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1254	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	840
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	667	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1911	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1027	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2791	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1870
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.98

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	44.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1485	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1981	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1327
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1054	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.94
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1728	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1222
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	971	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1558	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1102
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	875	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3110	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2019
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.06

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	-
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	F
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1603	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.15
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1707	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1132
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	898	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1611	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1000
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	885	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1943	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1180
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1045	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2583	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1520
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1345	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2247	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1322
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1170	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1459	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	916
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	811	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.59
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1869	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1136
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1005	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2275	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1339
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1185	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2001	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1216
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1076	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1453	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	933
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	826	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.60
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2036	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1292
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1144	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2134	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1296
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1147	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2067	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1298
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1148	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2111	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1310
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1160	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1466	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	974
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	862	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2484	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1613
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1428	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1854	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1204
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1066	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2053	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	1318
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1166	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1563	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	970
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	859	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1816	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1115
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	987	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2291	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1488
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1317	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1165	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	742
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	640	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1174	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	765
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	660	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1203	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	802
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	691	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1357	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	856
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	738	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy AM EB - SR 138 to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	217	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.5

Vehicle Results

Average Speed, mi/h	36.5	Percent Followers, %	38.6
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	2.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	217	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.17	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy AM WB - SR 42-138 to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	374	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.1

Vehicle Results

Average Speed, mi/h	36.1	Percent Followers, %	50.8
Segment Travel Time, minutes	1.66	Followers Density, followers/mi/ln	5.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	374	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.44	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy PM EB - SR 138 to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	456	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.9

Vehicle Results

Average Speed, mi/h	35.9	Percent Followers, %	55.6
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	7.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	456	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.55	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	22. Davidson Pkwy PM WB - SR 42-138 to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	407	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59719	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39491	PF Power Coefficient	0.68748
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.0

Vehicle Results

Average Speed, mi/h	36.0	Percent Followers, %	52.8
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	6.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	407	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.49	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1251	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.74

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	80.1
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	21.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1251	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.23	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	392	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.6

Vehicle Results

Average Speed, mi/h	47.6	Percent Followers, %	49.9
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	4.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	392	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	663	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.39

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	63.7
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	9.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	663	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.90	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1295	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.76

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	22.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	80.9
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	22.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1295	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.24	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	461	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.90297	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39236	PF Power Coefficient	0.71017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.3

Vehicle Results

Average Speed, mi/h	41.3	Percent Followers, %	55.2
Segment Travel Time, minutes	1.45	Followers Density, followers/mi/ln	6.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	461	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.86	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	337	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.57	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.89936	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39224	PF Power Coefficient	0.71020
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.6

Vehicle Results

Average Speed, mi/h	41.6	Percent Followers, %	47.4
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	3.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	337	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.20	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	272	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90839	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39254	PF Power Coefficient	0.71011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.9

Vehicle Results

Average Speed, mi/h	41.9	Percent Followers, %	42.5
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	272	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.00	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	343	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90478	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39242	PF Power Coefficient	0.71015
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.6

Vehicle Results

Average Speed, mi/h	41.6	Percent Followers, %	47.9
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	4.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	343	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.50	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	282	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.5

Vehicle Results

Average Speed, mi/h	36.5	Percent Followers, %	44.2
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	282	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.50	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59720	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39413	PF Power Coefficient	0.68833
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	33.6
Segment Travel Time, minutes	1.63	Followers Density, followers/mi/ln	1.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	29
Bicycle LOS Score	2.17	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	469	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.0

Vehicle Results

Average Speed, mi/h	36.0	Percent Followers, %	56.3
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	7.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	469	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.76	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	231	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60803	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39515	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	39.9
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	2.5
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	231	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.20	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM EB - Brentwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	1019	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.60

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22185	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37178	PF Power Coefficient	0.73001
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	16.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	75.1
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	16.6
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1019	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.12	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM WB - Flippen Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	984	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.58

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22004	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37182	PF Power Coefficient	0.73004
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	74.2
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	15.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	984	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.34	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM EB - Brentwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	1235	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.73

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22365	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37175	PF Power Coefficient	0.72997
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	79.8
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	21.6
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1235	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.01	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM WB - Flippen Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	8.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	755	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.44

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	3.22365	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37175	PF Power Coefficient	0.72997
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	67.3
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	10.9
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	755	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.76	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	570	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.20152	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37358	PF Power Coefficient	0.72882
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	59.8
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	7.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	570	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.83	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM WB - Brentwood Pkwy to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1278	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.75

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.19972	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37361	PF Power Coefficient	0.72886
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	22.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	80.6
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	22.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1278	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.47	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1345	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.91	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.79

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	24.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	81.8
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	24.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1345	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.05	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM WB - Brentwood Pkwy to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	793	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.99	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.47

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	68.6
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	11.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	793	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.78	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	443	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.9

Vehicle Results

Average Speed, mi/h	47.9	Percent Followers, %	52.9
Segment Travel Time, minutes	1.25	Followers Density, followers/mi/ln	4.9
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	443	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.70	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	750	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.66	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.44

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.3

Vehicle Results

Average Speed, mi/h	47.3	Percent Followers, %	67.0
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	10.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	750	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.97	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	706	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.3

Vehicle Results

Average Speed, mi/h	47.3	Percent Followers, %	65.3
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	9.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	706	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.94	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	476	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.8

Vehicle Results

Average Speed, mi/h	47.8	Percent Followers, %	54.8
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	5.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	476	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.74	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	746	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	432
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	424	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	929	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	510
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	499	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	469	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	271
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	261	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	971	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	533
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	528	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	893	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	423
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	338	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2383	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1045
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	836	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.15
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1170	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	533
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	433	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.54
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2256	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	974
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	792	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1165	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	514
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	418	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.52
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2228	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	982
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	799	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1089	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	500
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	403	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2039	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	969
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	781	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.47
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	860	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	353
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	302	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2280	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	946
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	809	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.47
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1254	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	560
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	445	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2791	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1246
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	990	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1728	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	815
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	647	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3110	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1346
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1069	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.95
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2111	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	874
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	773	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2484	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1075
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	952	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1563	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	647
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	573	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.42
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2291	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	992
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	878	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1088	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	638
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	625	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	310	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.79	Flow Rate (V_p), pc/h/ln	204
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	4.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	196	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	597	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	338
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	332	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1230	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	660
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	647	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM - Brenwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	866	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	520
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.1		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	509	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd AM - Brenwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	886	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	507
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.1		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	492	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.98
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM - Brenwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1198	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	624
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.1		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	618	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	26. Walt Stephens Rd PM - Brenwood Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.9		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	717	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	381
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.1		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	377	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.41
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Background Improvements
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1086	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	652
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	639	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	785	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	400
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	396	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.43
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	836	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	69.9
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	12.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	836	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.02	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	886	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	71.4
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	13.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	886	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.05	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM NB - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	947	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.56

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.9

Vehicle Results

Average Speed, mi/h	46.9	Percent Followers, %	73.1
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	14.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	947	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1261	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.74

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.5

Vehicle Results

Average Speed, mi/h	46.5	Percent Followers, %	80.2
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	21.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1261	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.23	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	737	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.43

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	66.8
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	10.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	737	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.96	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	601	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.2
Speed Slope Coefficient	3.17352	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37571	PF Power Coefficient	0.72746
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.8

Vehicle Results

Average Speed, mi/h	45.8	Percent Followers, %	61.3
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	8.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	601	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.34	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	867	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.51

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.4

Vehicle Results

Average Speed, mi/h	45.4	Percent Followers, %	71.1
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	13.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	867	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.04	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM SB - SR 42-138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	1098	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.65

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17894	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37564	PF Power Coefficient	0.72735
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.1

Vehicle Results

Average Speed, mi/h	45.1	Percent Followers, %	77.1
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	18.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1098	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	467	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.7

Vehicle Results

Average Speed, mi/h	35.7	Percent Followers, %	56.3
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	7.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	467	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.37	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	367	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58184	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39439	PF Power Coefficient	0.68639
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.8

Vehicle Results

Average Speed, mi/h	35.8	Percent Followers, %	50.4
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	5.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	367	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	498	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.29

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.6

Vehicle Results

Average Speed, mi/h	35.6	Percent Followers, %	57.9
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	8.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	498	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.41	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Projet
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	413	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58725	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39492	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.8

Vehicle Results

Average Speed, mi/h	35.8	Percent Followers, %	53.2
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	6.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	412	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.14	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	538	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	294
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	280	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.22
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	870	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	486
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	463	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.47
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	739	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	419
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	411	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	829	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	450
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	441	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	829	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	560
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	455	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	576	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	377
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	306	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	844	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	540
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	440	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	985	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	612
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	497	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	844	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	600
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	480	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1837	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1262
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1009	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2176	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1432
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1145	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.31
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1426	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	968
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	775	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1122	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	760
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	623	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1858	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1192
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	978	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.34
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1997	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1268
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1040	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1512	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1002
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	822	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1090	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	745
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	606	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1590	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1074
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	874	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2076	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1344
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	38.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1093	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1417	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	979
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	796	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1086	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	718
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	584	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1575	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	988
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	804	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2051	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1356
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1103	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1382	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	934
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	759	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1037	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	715
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	576	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.31
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1869	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1208
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	973	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1945	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1387
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1118	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1386	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	886
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	714	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.42
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	699	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	430
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	368	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.07
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1285	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	774
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	662	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1861	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1170
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1001	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1312	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	799
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	683	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.38
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	786	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	484
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	414	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1303	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	786
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	672	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.38
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2029	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1262
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1079	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1308	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	797
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	681	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.38
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	903	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	625
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	496	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1402	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	960
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	762	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2053	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1376
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1092	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1333	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	884
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	702	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1838	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1232
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	978	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2155	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1459
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1159	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3029	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2029
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.07

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	-
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	F
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1611	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.15
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2552	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1710
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.90

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	39.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1357	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.07
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2113	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1495
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.79

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1187	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.00
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1742	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1232
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	979	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3176	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2062
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.09

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	-
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	F
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1637	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.16
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2116	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1402
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1114	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1834	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1138
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1008	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1991	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1210
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1070	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2583	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1520
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1345	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2475	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1456
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1289	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1706	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1071
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	948	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1913	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1162
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1028	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2320	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1366
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1208	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.80
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2227	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1353
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1197	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1690	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	1085
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	960	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2050	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1302
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1152	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2194	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1333
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1180	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2268	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1424
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1260	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2266	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1407
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1245	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.81
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1374	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	914
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	808	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.59
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2486	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1614
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1429	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1768	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1148
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1016	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1933	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	1241
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1098	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1460	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	906
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	802	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.59
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1695	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1041
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	921	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2153	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1398
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1237	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.81
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1119	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	714
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	615	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1098	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	716
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	617	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1133	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	756
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	651	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1300	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	820
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	707	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	833	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	16.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.1

Vehicle Results

Average Speed, mi/h	35.1	Percent Followers, %	70.8
Segment Travel Time, minutes	1.71	Followers Density, followers/mi/ln	16.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	833	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.85	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1038	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.61

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	22.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.8

Vehicle Results

Average Speed, mi/h	34.8	Percent Followers, %	76.1
Segment Travel Time, minutes	1.72	Followers Density, followers/mi/ln	22.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1038	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.96	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1311	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.77

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	30.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.5

Vehicle Results

Average Speed, mi/h	34.5	Percent Followers, %	81.3
Segment Travel Time, minutes	1.74	Followers Density, followers/mi/ln	30.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1311	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.08	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1103	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.65

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	24.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.7

Vehicle Results

Average Speed, mi/h	34.7	Percent Followers, %	77.5
Segment Travel Time, minutes	1.73	Followers Density, followers/mi/ln	24.6
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1103	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.99	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy AM EB - *proposed* Reeves Creek Pkwy to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	272	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.7

Vehicle Results

Average Speed, mi/h	35.7	Percent Followers, %	43.5
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	3.3
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	272	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.28	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy AM WB - SR 42-138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	482	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.2

Vehicle Results

Average Speed, mi/h	35.2	Percent Followers, %	57.1
Segment Travel Time, minutes	1.70	Followers Density, followers/mi/ln	7.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	482	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.57	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy PM EB - *proposed* Reeves Creek Pkwy to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	652	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.38

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.9

Vehicle Results

Average Speed, mi/h	34.9	Percent Followers, %	64.6
Segment Travel Time, minutes	1.72	Followers Density, followers/mi/ln	12.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	652	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.73	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy PM WB - SR 42-138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	491	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.29

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.2

Vehicle Results

Average Speed, mi/h	35.2	Percent Followers, %	57.5
Segment Travel Time, minutes	1.71	Followers Density, followers/mi/ln	8.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	491	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.58	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1123	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.66

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.3

Vehicle Results

Average Speed, mi/h	46.3	Percent Followers, %	77.5
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	18.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1123	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.17	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	392	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.6

Vehicle Results

Average Speed, mi/h	47.6	Percent Followers, %	49.9
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	4.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	392	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	599	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	61.0
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	7.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	599	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.85	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1175	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.69

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	20.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	78.6
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	20.0
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1175	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.19	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	454	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.90297	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39236	PF Power Coefficient	0.71017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.3

Vehicle Results

Average Speed, mi/h	41.3	Percent Followers, %	54.8
Segment Travel Time, minutes	1.45	Followers Density, followers/mi/ln	6.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	454	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.86	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	391	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.57	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.89936	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39224	PF Power Coefficient	0.71020
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.4

Vehicle Results

Average Speed, mi/h	41.4	Percent Followers, %	51.1
Segment Travel Time, minutes	1.45	Followers Density, followers/mi/ln	4.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	391	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.27	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	273	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90839	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39254	PF Power Coefficient	0.71011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.9

Vehicle Results

Average Speed, mi/h	41.9	Percent Followers, %	42.6
Segment Travel Time, minutes	1.43	Followers Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	273	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.00	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	339	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90478	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39242	PF Power Coefficient	0.71015
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.7

Vehicle Results

Average Speed, mi/h	41.7	Percent Followers, %	47.6
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	3.9
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	339	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.49	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	273	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.5

Vehicle Results

Average Speed, mi/h	36.5	Percent Followers, %	43.5
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	3.3
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	273	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.49	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	220	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59720	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39413	PF Power Coefficient	0.68833
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.5

Vehicle Results

Average Speed, mi/h	36.5	Percent Followers, %	38.8
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	2.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	220	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.63	Bicycle Effective Speed Factor	3.84
Bicycle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	490	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.29

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.0

Vehicle Results

Average Speed, mi/h	36.0	Percent Followers, %	57.4
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	7.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	490	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.78	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	245	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60803	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39515	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.6

Vehicle Results

Average Speed, mi/h	36.6	Percent Followers, %	41.1
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	245	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.23	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM EB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1006	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.59

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15681	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37733	PF Power Coefficient	0.72618
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	16.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.9

Vehicle Results

Average Speed, mi/h	44.9	Percent Followers, %	74.9
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	16.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1006	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.12	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM WB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	993	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.58

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24037	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36997	PF Power Coefficient	0.73122
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	74.4
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	15.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	993	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.34	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM EB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1361	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.80

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15861	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37731	PF Power Coefficient	0.72615
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	25.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.5

Vehicle Results

Average Speed, mi/h	44.5	Percent Followers, %	82.1
Segment Travel Time, minutes	1.35	Followers Density, followers/mi/ln	25.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1361	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM WB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1361	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.80

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15861	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37731	PF Power Coefficient	0.72615
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	25.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.5

Vehicle Results

Average Speed, mi/h	44.5	Percent Followers, %	82.1
Segment Travel Time, minutes	1.35	Followers Density, followers/mi/ln	25.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1361	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM EB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	873	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.51

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24217	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36993	PF Power Coefficient	0.73118
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.6

Vehicle Results

Average Speed, mi/h	46.6	Percent Followers, %	71.1
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	13.3
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	873	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.04	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM WB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	993	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.58

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24037	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36997	PF Power Coefficient	0.73122
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	74.4
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	15.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	993	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.34	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM EB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1203	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.71

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24398	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36988	PF Power Coefficient	0.73114
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	20.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	79.2
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	20.6
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1203	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.99	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM WB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	838	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24398	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36988	PF Power Coefficient	0.73114
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.7

Vehicle Results

Average Speed, mi/h	46.7	Percent Followers, %	70.0
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	12.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	838	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.81	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	655	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.39

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.20152	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37358	PF Power Coefficient	0.72882
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	63.5
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	9.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	655	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.90	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM WB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1225	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.72

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.19972	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37361	PF Power Coefficient	0.72886
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	79.7
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	21.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1225	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.45	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1312	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.91	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.77

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	23.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	81.3
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	23.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1312	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.04	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM WB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	840	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.99	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.9

Vehicle Results

Average Speed, mi/h	45.9	Percent Followers, %	70.2
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	12.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	840	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.81	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	480	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.8

Vehicle Results

Average Speed, mi/h	47.8	Percent Followers, %	55.0
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	5.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	480	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.74	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	723	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.66	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.43

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.3

Vehicle Results

Average Speed, mi/h	47.3	Percent Followers, %	66.0
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	10.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	723	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	681	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.4

Vehicle Results

Average Speed, mi/h	47.4	Percent Followers, %	64.4
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	9.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	681	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.92	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	516	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.7

Vehicle Results

Average Speed, mi/h	47.7	Percent Followers, %	56.9
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	6.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	516	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.78	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	541	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	312
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	301	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.98
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1010	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	554
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	549	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.60
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	844	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	400
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	320	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2176	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	954
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	764	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1090	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	497
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	404	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2076	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	896
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	728	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.80
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1838	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	821
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	652	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2155	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	973
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	772	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3029	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1353
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1074	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.95
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2552	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1140
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	905	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2113	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	997
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	791	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3176	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1375
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1091	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2050	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	868
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	768	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2268	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	949
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	840	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2266	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	938
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	830	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2486	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1076
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	952	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	733	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	425
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	416	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	882	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	530
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	519	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1219	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	669
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	655	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	960	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	563
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	552	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.81
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	977	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	573
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	561	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	310	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.79	Flow Rate (V_p), pc/h/ln	204
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	4.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	196	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	539	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	306
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	299	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.50
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1116	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	600
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	587	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	855	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	513
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	503	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	905	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	518
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	503	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1320	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	688
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	680	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	955	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	508
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	503	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM - Brenwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	742	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	446
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	436	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM - Brenwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	894	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	512
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	497	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM - Brentwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1167	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	608
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	602	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM - Brentwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	813	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	432
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	428	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.47
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1041	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	630
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	612	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.09
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	832	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	424
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	420	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.46
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM NB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	952	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.56

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.9

Vehicle Results

Average Speed, mi/h	46.9	Percent Followers, %	73.3
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	14.9
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	952	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.09	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	999	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.59

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.9

Vehicle Results

Average Speed, mi/h	46.9	Percent Followers, %	74.5
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	15.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	999	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.11	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM NB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1071	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.63

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.8

Vehicle Results

Average Speed, mi/h	46.8	Percent Followers, %	76.3
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	17.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1071	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.15	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM SB - Walt Stephens Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1433	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.84

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	25.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.3

Vehicle Results

Average Speed, mi/h	46.3	Percent Followers, %	83.1
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	25.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1433	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.29	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	818	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.48

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.5

Vehicle Results

Average Speed, mi/h	45.5	Percent Followers, %	69.5
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	12.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	818	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.01	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM SB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	689	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.41

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.2
Speed Slope Coefficient	3.17352	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37571	PF Power Coefficient	0.72746
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.7

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	65.0
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	9.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	689	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.40	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	948	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.56

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	73.4
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	15.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	948	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.09	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM SB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	1254	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.74

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17894	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37564	PF Power Coefficient	0.72735
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	22.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.9

Vehicle Results

Average Speed, mi/h	44.9	Percent Followers, %	80.3
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	22.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1254	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.02	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	526	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.6

Vehicle Results

Average Speed, mi/h	35.6	Percent Followers, %	59.2
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	8.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	526	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.43	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd AM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	424	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.25

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58184	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39439	PF Power Coefficient	0.68639
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.7

Vehicle Results

Average Speed, mi/h	35.7	Percent Followers, %	53.9
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	6.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	424	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.71	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	562	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.33

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58545	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39474	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	60.9
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	9.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	562	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.47	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	3. Banks Rd PM WB - Rock Quarry Rd to Banks Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	469	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.96	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.4
Speed Slope Coefficient	2.58725	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39492	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.7

Vehicle Results

Average Speed, mi/h	35.7	Percent Followers, %	56.4
Segment Travel Time, minutes	1.68	Followers Density, followers/mi/ln	7.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	469	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.21	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	604	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	330
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	315	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.28
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd AM - Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	984	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	550
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	523	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.53
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	832	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	472
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	462	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	4. Rock Quarry Rd PM-Banks Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	938	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	509
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	499	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	937	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	634
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	515	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 AM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	663	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	434
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	353	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.43
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.6
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	971	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	622
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	506	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	5. SR 42 PM - SR 138 and Valley Hill Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1109	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	689
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	560	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	953	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	677
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	541	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2118	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1454
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1164	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2439	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1604
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.84

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	41.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1284	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1653	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1123
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	898	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.19
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1275	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	864
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	708	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.18
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2129	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1366
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1121	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.41
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2300	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1461
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1198	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.44
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1727	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1144
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	939	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.32
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1226	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	838
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	681	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1796	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1214
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	987	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2341	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1516
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	43.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1232	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.07
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1592	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1100
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	894	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1221	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	808
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	656	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1779	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1116
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	908	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2313	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1530
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	39.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1244	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.07
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1553	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1050
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	853	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1169	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	806
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	649	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.37
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2115	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1366
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1102	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2206	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1573
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	38.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1268	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1562	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	999
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	805	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.48
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	782	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	482
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	412	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 AM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1456	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	878
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	751	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.43
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2096	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1318
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1127	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	11. SR 138 PM between Walter Way and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1482	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	903
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	772	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	892	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	549
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	469	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.19
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1472	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	888
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	759	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.44
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2265	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1409
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1205	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1439	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	876
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	749	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.43
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1018	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	704
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	559	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 AM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1581	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1082
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	859	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2297	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1539
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1222	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	13. SR 138 PM between Daniel Dr and Davidson Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1461	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	968
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	769	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2181	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1461
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1160	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2449	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1658
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1317	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.05
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3448	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2310
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	-
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	F
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1834	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.22
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	3039	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2036
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.07

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	45.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	F
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1616	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.16
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2466	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1745
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.92

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	39.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1385	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.08
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1975	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1398
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1110	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.96
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3617	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2348
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.24

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	-
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	F
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1864	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2501	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1658
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1316	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.05
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2118	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1315
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1164	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2231	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1356
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1199	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2928	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1723
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.91

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	39.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1525	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2918	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1718
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.90

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	39.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1520	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1966	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1234
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1092	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2157	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1310
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1160	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2620	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1542
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1365	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2572	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1562
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.82

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1383	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1943	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	1248
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1104	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2315	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1470
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1301	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2467	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1498
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.79

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1326	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2620	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1644
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	41.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1456	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2601	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1615
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	36.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1429	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1551	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	1031
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	912	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2817	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1830
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.96

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	42.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1619	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.95
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2018	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1310
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1160	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2197	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	1410
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1248	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.81
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1648	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1023
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	905	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1920	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1179
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1043	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2455	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1594
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.84

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	38.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1411	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1276	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	814
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	701	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 AM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1240	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	808
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	697	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1284	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	856
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	738	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	21. SR 138 PM between Speer Rd and Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.5
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1486	Heavy Vehicle Adjustment Factor (f_{HV})	0.862
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	937
Total Trucks, %	16.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.9		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	808	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	973	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.57

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	20.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.9

Vehicle Results

Average Speed, mi/h	34.9	Percent Followers, %	74.5
Segment Travel Time, minutes	1.72	Followers Density, followers/mi/ln	20.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	973	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.93	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1331	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.78

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	31.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.5

Vehicle Results

Average Speed, mi/h	34.5	Percent Followers, %	81.7
Segment Travel Time, minutes	1.74	Followers Density, followers/mi/ln	31.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1331	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.09	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1747	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	1.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	39.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.3

Vehicle Results

Average Speed, mi/h	34.3	Percent Followers, %	85.2
Segment Travel Time, minutes	1.75	Followers Density, followers/mi/ln	39.2
Vehicle LOS	F		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1747	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.23	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1392	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.82

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	33.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.5

Vehicle Results

Average Speed, mi/h	34.5	Percent Followers, %	82.6
Segment Travel Time, minutes	1.74	Followers Density, followers/mi/ln	33.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1392	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.11	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy AM EB - *proposed* Reeves Creek Pkwy to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	343	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	48.8
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	4.7
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	343	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.40	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy AM WB - SR 42-138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	615	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.36

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	63.2
Segment Travel Time, minutes	1.72	Followers Density, followers/mi/ln	11.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	615	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.70	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy PM EB - *proposed* Reeves Creek Pkwy to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	918	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.54

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.6

Vehicle Results

Average Speed, mi/h	34.6	Percent Followers, %	73.1
Segment Travel Time, minutes	1.74	Followers Density, followers/mi/ln	19.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	918	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.90	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy PM WB - SR 42-138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	11.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	643	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.38

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	36.9
Speed Slope Coefficient	2.56061	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39389	PF Power Coefficient	0.68453
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.9

Vehicle Results

Average Speed, mi/h	34.9	Percent Followers, %	64.3
Segment Travel Time, minutes	1.72	Followers Density, followers/mi/ln	11.8
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	643	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1269	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.75

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	22.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	80.4
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	22.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1269	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.23	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	442	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.5

Vehicle Results

Average Speed, mi/h	47.5	Percent Followers, %	52.9
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	4.9
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	442	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.70	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	677	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	64.3
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	9.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	677	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.91	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future with Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	6.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	1322	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.78

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.6
Speed Slope Coefficient	3.24624	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36955	PF Power Coefficient	0.73141
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	23.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	81.4
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	23.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1322	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.25	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	519	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.90297	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39236	PF Power Coefficient	0.71017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.2

Vehicle Results

Average Speed, mi/h	41.2	Percent Followers, %	58.3
Segment Travel Time, minutes	1.46	Followers Density, followers/mi/ln	7.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	519	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.92	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd AM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	440	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.57	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.2
Speed Slope Coefficient	2.89936	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39224	PF Power Coefficient	0.71020
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.3

Vehicle Results

Average Speed, mi/h	41.3	Percent Followers, %	54.0
Segment Travel Time, minutes	1.45	Followers Density, followers/mi/ln	5.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	440	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.33	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM NB - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	313	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90839	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39254	PF Power Coefficient	0.71011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.8

Vehicle Results

Average Speed, mi/h	41.8	Percent Followers, %	45.7
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	313	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.07	Bicycle Effective Speed Factor	4.17
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	24. Spivey Rd PM SB - SR 138 to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	9.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	382	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	2.90478	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39242	PF Power Coefficient	0.71015
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	41.5

Vehicle Results

Average Speed, mi/h	41.5	Percent Followers, %	50.5
Segment Travel Time, minutes	1.44	Followers Density, followers/mi/ln	4.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	382	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.55	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	313	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.79	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.4

Vehicle Results

Average Speed, mi/h	36.4	Percent Followers, %	46.6
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	4.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	313	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.56	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd AM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	252	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.6
Speed Slope Coefficient	2.59720	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39413	PF Power Coefficient	0.68833
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.4

Vehicle Results

Average Speed, mi/h	36.4	Percent Followers, %	41.7
Segment Travel Time, minutes	1.65	Followers Density, followers/mi/ln	2.9
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	252	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	3.84
Bicycle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM EB - Flippen Rd to Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	563	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.86	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.33

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60623	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39499	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.9

Vehicle Results

Average Speed, mi/h	35.9	Percent Followers, %	60.9
Segment Travel Time, minutes	1.67	Followers Density, followers/mi/ln	9.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	563	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.85	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	25. Red Oak Rd PM WB - Rock Quarry Rd to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	8.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	283	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	2.60803	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39515	PF Power Coefficient	0.68834
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	36.5

Vehicle Results

Average Speed, mi/h	36.5	Percent Followers, %	44.3
Segment Travel Time, minutes	1.64	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	282	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.30	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM EB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1141	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.67

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15681	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37733	PF Power Coefficient	0.72618
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.7

Vehicle Results

Average Speed, mi/h	44.7	Percent Followers, %	78.0
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	19.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1141	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.18	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM WB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1151	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.68

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15500	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37735	PF Power Coefficient	0.72622
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	20.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.7

Vehicle Results

Average Speed, mi/h	44.7	Percent Followers, %	78.2
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	20.2
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1151	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.41	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM EB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1557	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.92

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15861	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37731	PF Power Coefficient	0.72615
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	29.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.2

Vehicle Results

Average Speed, mi/h	44.2	Percent Followers, %	85.0
Segment Travel Time, minutes	1.36	Followers Density, followers/mi/ln	29.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1557	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.12	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM WB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1147	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.67

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15861	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37731	PF Power Coefficient	0.72615
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	20.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.7

Vehicle Results

Average Speed, mi/h	44.7	Percent Followers, %	78.2
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	20.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1147	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.97	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM EB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #2996	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	995	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.59

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24217	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36993	PF Power Coefficient	0.73118
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	16.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.4

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	74.5
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	16.0
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	995	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.11	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM WB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1098	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.65

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24037	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36997	PF Power Coefficient	0.73122
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.2

Vehicle Results

Average Speed, mi/h	46.2	Percent Followers, %	76.9
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	18.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1098	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.39	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM EB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1352	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.80

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24398	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36988	PF Power Coefficient	0.73114
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	24.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.0

Vehicle Results

Average Speed, mi/h	46.0	Percent Followers, %	81.9
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	24.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1352	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.05	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM WB - *proposed* Reeves Creek Pkwy to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	959	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.95	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.56

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.5
Speed Slope Coefficient	3.24398	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36988	PF Power Coefficient	0.73114
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.5

Vehicle Results

Average Speed, mi/h	46.5	Percent Followers, %	73.5
Segment Travel Time, minutes	1.29	Followers Density, followers/mi/ln	15.2
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	959	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.88	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	730	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.89	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.43

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.20152	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37358	PF Power Coefficient	0.72882
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.1

Vehicle Results

Average Speed, mi/h	46.1	Percent Followers, %	66.5
Segment Travel Time, minutes	1.30	Followers Density, followers/mi/ln	10.5
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	730	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.95	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM WB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1376	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.81

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.7
Speed Slope Coefficient	3.19972	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37361	PF Power Coefficient	0.72886
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	25.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.2

Vehicle Results

Average Speed, mi/h	45.2	Percent Followers, %	82.3
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	25.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1376	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.51	Bicycle Effective Speed Factor	4.42
Bicycle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM EB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1446	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.91	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.85

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	26.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.1

Vehicle Results

Average Speed, mi/h	45.1	Percent Followers, %	83.4
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	26.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1446	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.09	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM WB - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	953	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.99	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.56

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.8
Speed Slope Coefficient	3.20333	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37355	PF Power Coefficient	0.72879
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.8

Vehicle Results

Average Speed, mi/h	45.8	Percent Followers, %	73.4
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	15.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	953	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.88	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	545	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.83	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.32

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.7

Vehicle Results

Average Speed, mi/h	47.7	Percent Followers, %	58.4
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	6.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	545	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.80	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd AM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	812	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.66	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.48

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	69.1
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	11.9
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	812	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.01	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM EB - Spivey Rd to Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	765	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.45

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.2

Vehicle Results

Average Speed, mi/h	47.2	Percent Followers, %	67.5
Segment Travel Time, minutes	1.27	Followers Density, followers/mi/ln	10.9
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	765	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.98	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	28. Walt Stephens Rd PM WB - Speer Rd to Spivey Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	586	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.0
Speed Slope Coefficient	3.26927	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36736	PF Power Coefficient	0.73272
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.6

Vehicle Results

Average Speed, mi/h	47.6	Percent Followers, %	60.3
Segment Travel Time, minutes	1.26	Followers Density, followers/mi/ln	7.4
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	586	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.84	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	838	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	486
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	476	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd AM - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	859	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.86	Flow Rate (V_p), pc/h/ln	510
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	499	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	996	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	546
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	535	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.80
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	1. Flippen Rd PM - Banks Rd to Walt Stephens Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1376	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	732
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	717	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.94
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	736	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	417
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	3.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	409	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	621	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	358
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	345	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.05
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	806	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	484
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	474	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1155	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	634
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	628	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	953	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	451
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	361	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 AM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2118	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	970
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	776	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2439	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1070
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	856	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.16
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	6. SR 42-138 PM between SR 138 and Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	24.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	39.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1653	Heavy Vehicle Adjustment Factor (f_{HV})	0.800
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	749
Total Trucks, %	25.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	6.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	599	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.98
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 AM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1275	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	576
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	472	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	10.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	7. SR 42-138 PM between Flippen Rd and E Atlanta Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2300	Heavy Vehicle Adjustment Factor (f_{HV})	0.820
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	974
Total Trucks, %	22.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	799	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.24
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 AM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1226	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	559
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	454	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	8. SR 42-138 PM between E Atlanta Rd and S Lee St
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	40.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	35.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2341	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1010
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	35.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	821	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.86
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 AM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1221	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	538
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	438	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.54
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	9. SR 42-138 PM between S Lee St and Rock Quarry Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	38.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2313	Heavy Vehicle Adjustment Factor (f_{HV})	0.813
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1020
Total Trucks, %	23.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	38.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	26.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	6.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	829	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	11.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 AM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1169	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	537
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	433	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.17
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	10. SR 42-138 PM between Rock Quarry Rd and SR 42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2206	Heavy Vehicle Adjustment Factor (f_{HV})	0.806
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1049
Total Trucks, %	24.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	845	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	12.51
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 AM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	892	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	366
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	9.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	313	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	7.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	12. SR 138 PM between Walter Way and Daniel Dr
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	37.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2265	Heavy Vehicle Adjustment Factor (f_{HV})	0.855
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	939
Total Trucks, %	17.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	37.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	803	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	8.47
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2181	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	974
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	773	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2449	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1106
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	878	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3448	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1540
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1223	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	3039	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1357
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1078	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.95
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2466	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1163
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	924	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1975	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	932
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	740	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3617	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1565
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.82

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1243	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.02
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2501	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1105
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	878	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2118	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	877
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	776	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2231	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	904
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	800	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.59
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2928	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1149
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1017	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2918	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1145
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1013	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1966	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	823
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	728	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.54
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2157	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	874
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	773	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2620	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1028
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	910	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2572	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1042
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	922	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1943	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	832
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	736	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.55
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2315	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	980
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	867	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.63
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2467	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	999
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	884	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2620	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1096
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	970	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 AM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2601	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	1077
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	953	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	19. SR 138 PM between I-75 NB and I-75 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2817	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1220
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1079	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2197	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	940
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	832	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 AM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1648	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	682
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	604	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.45
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1920	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	786
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	696	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.52
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	20. SR 138 PM between I-75 SB and Speer Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2455	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	1063
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	941	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	856	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	496
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	486	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1131	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	679
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	665	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1625	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	892
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	874	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.04
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1211	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	710
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	696	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy AM - *proposed* Reeves Creek Pkwy to SR 138-42
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	302	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	175
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	4.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.9		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	172	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.22
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22B. Davidson Pkwy PM - *proposed* Reeves Creek Pkwy to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	854	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	468
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.9		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	459	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1104	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	648
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	634	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.88
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd AM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	349	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.79	Flow Rate (V_p), pc/h/ln	230
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	5.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	221	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	609	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	345
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.7		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	338	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	23. Speer Rd PM - Walt Stephens Rd to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1256	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	674
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	661	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.90
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	970	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	582
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	571	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1036	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	592
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	576	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.06
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1510	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	786
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	778	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1090	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	580
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	574	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.62
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM - Brenwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	846	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	508
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	498	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.76
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd AM - Brenwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	988	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	566
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	549	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.04
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM - Brenwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1311	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	682
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	676	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26B. Walt Stephens Rd PM - Brenwood Pkwy to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	911	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	484
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	1.8		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	479	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.53
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	660	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	378
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	371	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd AM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1170	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	702
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	688	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.92
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1347	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.91	Flow Rate (V_p), pc/h/ln	748
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	740	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	27. Walt Stephens Rd PM - Speer Rd to Brentwood Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	943	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	481
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	476	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.52
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	746	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.44

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.6

Vehicle Results

Average Speed, mi/h	45.6	Percent Followers, %	67.1
Segment Travel Time, minutes	1.31	Followers Density, followers/mi/ln	11.0
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	746	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.96	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	885	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.4

Vehicle Results

Average Speed, mi/h	45.4	Percent Followers, %	71.6
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	13.9
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	885	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.05	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1707	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	762
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	16.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	605	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1926	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1304
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1035	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2921	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1305
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	29.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1036	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.93
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2115	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1417
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1125	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1589	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1124
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	25.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	893	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1831	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1214
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	964	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.89
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1838	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1116
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	988	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.69
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2190	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1289
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1141	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1759	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1068
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	946	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1943	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1180
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1045	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1896	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1204
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	30.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1065	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1983	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1245
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1102	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	575	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.4

Vehicle Results

Average Speed, mi/h	35.4	Percent Followers, %	61.5
Segment Travel Time, minutes	1.69	Followers Density, followers/mi/ln	10.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	575	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.66	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	885	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	72.3
Segment Travel Time, minutes	1.71	Followers Density, followers/mi/ln	18.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	885	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.88	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	843	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.50

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.1

Vehicle Results

Average Speed, mi/h	35.1	Percent Followers, %	71.1
Segment Travel Time, minutes	1.71	Followers Density, followers/mi/ln	17.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	843	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.86	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	979	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.58

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.9

Vehicle Results

Average Speed, mi/h	34.9	Percent Followers, %	74.7
Segment Travel Time, minutes	1.72	Followers Density, followers/mi/ln	21.0
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	979	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.93	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	880	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	528
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	518	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM WB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1103	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.65

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15500	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37735	PF Power Coefficient	0.72622
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	19.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.7

Vehicle Results

Average Speed, mi/h	44.7	Percent Followers, %	77.2
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	19.1
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1103	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.39	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1367	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	712
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	705	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.72
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM WB - Flippen Rd to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	1033	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.97	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.61

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.9
Speed Slope Coefficient	3.15861	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37731	PF Power Coefficient	0.72615
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	17.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.9

Vehicle Results

Average Speed, mi/h	44.9	Percent Followers, %	75.6
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	17.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1033	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.92	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	506	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	294
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	288	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.48
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	752	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	452
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	442	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.70
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	784	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	430
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	422	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.67
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	852	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	500
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	490	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	993	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	568
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	552	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.04
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2029 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1002	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	532
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	527	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.58
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	827	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.90	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.5

Vehicle Results

Average Speed, mi/h	45.5	Percent Followers, %	69.8
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	12.7
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	827	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.02	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM NB - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	11.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	962	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.57

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.3
Speed Slope Coefficient	3.17713	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37566	PF Power Coefficient	0.72739
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	15.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.3

Vehicle Results

Average Speed, mi/h	45.3	Percent Followers, %	73.8
Segment Travel Time, minutes	1.32	Followers Density, followers/mi/ln	15.7
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	962	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.09	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2013	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	899
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	714	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2182	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1478
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1173	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3321	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1483
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1178	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2478	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1660
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.2
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	37.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1318	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	14.05
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 AM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1802	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1275
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	28.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1012	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.92
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	15. SR 138 PM between I-675 NB and I-675 SB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2149	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	1424
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1131	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 AM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2058	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1250
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1106	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.75
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	16. SR 138 PM between I-675 SB and Hannover Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2467	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1452
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	32.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1285	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 AM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1983	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1204
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	27.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1066	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	17. SR 138 PM between Hannover Pkwy and Mt Zion Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.7
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	43.3		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2220	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	1348
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.3
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	31.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	1.7		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1194	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2141	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	1359
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	34.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1203	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2268	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1424
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	35.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	E
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1260	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	670	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.39

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	35.3

Vehicle Results

Average Speed, mi/h	35.3	Percent Followers, %	65.4
Segment Travel Time, minutes	1.70	Followers Density, followers/mi/ln	12.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	670	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.74	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1133	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.67

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	25.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.7

Vehicle Results

Average Speed, mi/h	34.7	Percent Followers, %	78.1
Segment Travel Time, minutes	1.73	Followers Density, followers/mi/ln	25.5
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1133	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.01	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM NB - *proposed* Reeves Creek Pkwy to SR 138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1142	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.93	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.67

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	25.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.7

Vehicle Results

Average Speed, mi/h	34.7	Percent Followers, %	78.3
Segment Travel Time, minutes	1.73	Followers Density, followers/mi/ln	25.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1142	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.01	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM SB - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	35	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1246	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.87	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.73

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	2.58364	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.39456	PF Power Coefficient	0.68640
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	28.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	34.6

Vehicle Results

Average Speed, mi/h	34.6	Percent Followers, %	80.2
Segment Travel Time, minutes	1.73	Followers Density, followers/mi/ln	28.9
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1246	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.05	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	995	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	597
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	585	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.84
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd AM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1124	Heavy Vehicle Adjustment Factor (f_{HV})	0.971
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	643
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	624	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.10
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1545	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	804
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	19.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	3.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	796	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.78
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange
Jurisdiction	City of Stockbridge	Time Period Analyzed	26A. Walt Stephens Rd PM - *proposed* Reeves Creek Pkwy to Flippen Rd
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	13.3
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	41.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1129	Heavy Vehicle Adjustment Factor (f_{HV})	0.990
Peak Hour Factor	0.95	Flow Rate (V_p), pc/h/ln	600
Total Trucks, %	1.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	41.7
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	14.4
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	594	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.64
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd AM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	744	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	422
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	3.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	413	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.66
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	2. Flippen Rd PM - Walt Stephens Rd to SR 42-138
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	11.8
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	818	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	491
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	3.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	481	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2013	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	899
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	20.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	714	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.74
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 AM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2182	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	985
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	21.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	782	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.79
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	3321	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1483
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.9
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	33.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	1178	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	14. SR 138 PM between Davidson Pkwy and I-675 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2478	Heavy Vehicle Adjustment Factor (f_{HV})	0.794
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1107
Total Trucks, %	26.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	24.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	879	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	13.85
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 AM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2141	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.89	Flow Rate (V_p), pc/h/ln	906
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	22.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	802	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.59
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	18. SR 138 PM between Mt Zion Rd and I-75 NB
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2268	Heavy Vehicle Adjustment Factor (f_{HV})	0.885
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	949
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	23.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	840	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	6.61
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	F

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	590	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.88	Flow Rate (V_p), pc/h/ln	342
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	8.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	335	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.56
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy AM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	963	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.85	Flow Rate (V_p), pc/h/ln	578
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	566	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1062	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.93	Flow Rate (V_p), pc/h/ln	582
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	13.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	571	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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Project Information

Analyst	JP	Date	
Agency	LOWE Engineers	Analysis Year	2035 Future w Project NB Interchange Improved
Jurisdiction	City of Stockbridge	Time Period Analyzed	22A. Davidson Pkwy PM - SR 138 to *proposed* Reeves Creek Pkwy
Project Description	Reeves Creek (Stockbridge) DRI #TBD	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	10.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	42.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1084	Heavy Vehicle Adjustment Factor (f_{HV})	0.980
Peak Hour Factor	0.87	Flow Rate (V_p), pc/h/ln	636
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	15.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	2.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	623	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.87
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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APPENDIX E: Trip Generation, Internal Capture

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
210- Single-Family Detached Housing					**282**	**Dwelling Unit**
Daily		2,699	1,350	1,349	Ln(T) = 0.92Ln(X)+2.71	50% / 50%
AM Peak Hour		205	51	154	T = 0.71(X) + 4.80	25% / 75%
PM Peak Hour		275	173	102	Ln(T) = 0.96Ln(X)+0.20	63% / 37%
Reductions for Internal Capture						
Daily	27%	736	474	262		
AM Peak Hour	3%	6	1	5		
PM Peak Hour	30%	83	59	24		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,963	876	1,087		
AM Peak Hour		199	50	149		
PM Peak Hour		192	114	78		
221- Multifamily Housing (Mid-Rise)					**1,003**	**Dwelling Unit**
Daily		5,465	2,733	2,732	T=5.45(X) - 1.75	50% / 50%
AM Peak Hour		328	85	243	Ln(T) = 0.98Ln(X)-0.98	26% / 74%
PM Peak Hour		405	247	158	Ln(T) = 0.96Ln(X)-0.63	61% / 39%
Reductions for Internal Capture						
Daily	27%	1,491	960	531		
AM Peak Hour	3%	10	2	8		
PM Peak Hour	30%	122	85	37		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		3,974	1,773	2,201		
AM Peak Hour		318	83	235		
PM Peak Hour		283	162	121		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
252- Senior Adult Housing—Attached					**429**	**Dwelling Unit**
Daily		1,699	850	849	T = 4.02(X) - 25.37	50% / 50%
AM Peak Hour		86	30	56	T = 0.2(X) - 0.18	35% / 65%
PM Peak Hour		105	58	47	T = 0.24(X) + 2.26	55% / 45%
Reductions for Internal Capture						
Daily	27%	463	298	165		
AM Peak Hour	3%	3	1	2		
PM Peak Hour	30%	31	20	11		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,236	552	684		
AM Peak Hour		83	29	54		
PM Peak Hour		74	38	36		
310- Hotel					**1,000**	**Rooms**
Daily		10,863	5,432	5,431	T = 11.29(X) - 426.97	50% / 50%
AM Peak Hour		495	292	203	T = 0.50(X) - 5.34	59% / 41%
PM Peak Hour		724	369	355	T = 0.75(X) - 26.02	51% / 49%
Reductions for Internal Capture						
Daily	5%	594	471	123		
AM Peak Hour	6%	28	0	28		
PM Peak Hour	7%	49	39	10		
Reductions for Modal Split						
Daily	5%	513	248	265		
AM Peak Hour	5%	23	15	8		
PM Peak Hour	5%	34	17	17		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		9,756	4,713	5,043		
AM Peak Hour		444	277	167		
PM Peak Hour		641	313	328		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
460- Arena					**247,000**	**1000 S.F.**
*NON Daily		1,562	781	781		50% / 50%
EVENT AM Peak Hour		138	119	19		86% / 14%
PM Peak Hour		175	28	147		16% / 84%
Reductions for Internal Capture						
Daily	30%	461	203	258		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	26%	46	7	39		
Reductions for Modal Split						
Daily	5%	55	29	26		
AM Peak Hour	5%	7	6	1		
PM Peak Hour	5%	6	1	5		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,046	549	497		
AM Peak Hour		131	113	18		
PM Peak Hour		123	20	103		
710- General Office Building					**620,000**	**1000 S.F.**
Daily		6,228	3,114	3,114	Ln(T) = 0.97Ln(X)+2.50	50% / 50%
AM Peak Hour		609	524	85	T=0.94(X) + 26.49	86% / 14%
PM Peak Hour		644	103	541	Ln(T) = 0.95Ln(X)+0.36	16% / 84%
Reductions for Internal Capture						
Daily	12%	754	281	473		
AM Peak Hour	11%	69	45	24		
PM Peak Hour	11%	73	24	49		
Reductions for Modal Split						
Daily	5%	274	142	132		
AM Peak Hour	5%	27	24	3		
PM Peak Hour	5%	29	4	25		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		5,200	2,691	2,509		
AM Peak Hour		513	455	58		
PM Peak Hour		542	75	467		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
760- Research and Development Center					**100,000**	**1000 S.F.**
Daily		1,228	614	614	T=10.23(X) + 204.68	50% / 50%
AM Peak Hour		42	32	10	T=0.42(X)	75% / 25%
PM Peak Hour		53	8	45	Ln(T) = 0.89Ln(X)+1.31	15% / 85%
Reductions for Internal Capture						
Daily	12%	148	55	93		
AM Peak Hour	14%	6	3	3		
PM Peak Hour	11%	6	2	4		
Reductions for Modal Split						
Daily	5%	54	28	26		
AM Peak Hour	5%	2	1	1		
PM Peak Hour	5%	2	0	2		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,026	531	495		
AM Peak Hour		34	28	6		
PM Peak Hour		45	6	39		
820- Shopping Center					**169,250**	**1000 S.F.**
Daily		8,598	4,299	4,299	Ln(T) = 0.68Ln(X)+5.57	50% / 50%
AM Peak Hour		236	146	90	T = 0.5(X) + 151.78	62% / 38%
PM Peak Hour		802	385	417	Ln(T) = 0.74Ln(X)+2.89	48% / 52%
Reductions for Internal Capture						
Daily	29%	2,536	975	1,561		
AM Peak Hour	14%	34	23	11		
PM Peak Hour	29%	235	92	143		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	26%	2,235	1,118	1,117		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	34%	273	131	142		
Net New External Vehicle Trips						
Daily		3,827	2,206	1,621		
AM Peak Hour		202	123	79		
PM Peak Hour		294	162	132		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
945- Gasoline/Service Station with Convenience Market					**18**	**Pumps**
Daily		3,671	1,836	1,835	T = 268.46(X) - 1161	50% / 50%
AM Peak Hour		245	125	120	T = 19(X) - 96.53	51% / 49%
PM Peak Hour		252	129	123	T = 13.99(X)	51% / 49%
Reductions for Internal Capture						
Daily	30%	1,084	417	667		
AM Peak Hour	14%	34	20	14		
PM Peak Hour	29%	73	31	42		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	59%	2,166	1,083	1,083		
AM Peak Hour	62%	152	78	74		
PM Peak Hour	56%	141	72	69		
Net New External Vehicle Trips						
Daily		421	336	85		
AM Peak Hour		59	27	32		
PM Peak Hour		38	26	12		
150- Warehousing					**150,000**	**1000 S.F.**
Daily		283	142	141	T=1.58(X) + 45.54	50% / 50%
AM Peak Hour		43	33	10	T=0.12(X) + 25.32	77% / 23%
PM Peak Hour		46	12	34	T=0.12(X) + 27.82	27% / 73%
Reductions for Internal Capture						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		283	142	141		
AM Peak Hour		43	33	10		
PM Peak Hour		46	12	34		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
Total Trip Generation						
Daily		42,296	21,151	21,145	210- Single-Family Detached Housing	
AM Peak Hour		2,427	1,437	990	221- Multifamily Housing (Mid-Rise)	
PM Peak Hour		3,481	1,512	1,969	252- Senior Adult Housing—Attached	
Reductions for Internal Capture					310- Hotel	
Daily	20%	8,267	4,134	4,133	460- Arena	
AM Peak Hour	8%	190	95	95	710- General Office Building	
PM Peak Hour	21%	718	359	359		
Reductions for Modal Split					760- Research and Development Center	
Daily	2%	896	447	449		
AM Peak Hour	2%	59	46	13	820- Shopping Center	
PM Peak Hour	2%	71	22	49		
Reductions for Pass-By Trips						
Daily	10%	4,401	2,201	2,200	945- Gasoline/Service Station with Convenience Market	
AM Peak Hour	6%	152	78	74		
PM Peak Hour	12%	414	203	211		
Net New External Vehicle Trips						
Daily		28,732	14,369	14,363		
AM Peak Hour		2,026	1,218	808		
PM Peak Hour		2,278	928	1,350		

Note: '1 Where: T = Trips; X = Density by Variable

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Reeves Creek DRI #TBD	**Organization:**	Lowe Engineers
Project Location:	Stockbridge, GA		
Scenario Description:	Future with Project - Phase 1		
Analysis Year:	2029		
Analysis Period:	**Daily (PM Peak Hour Rates)**		

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	DeveloDailyent Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,760	720,000	See Trip Gen	7,456	3,728	3,728
Retail	820,945	169,250	See Trip Gen	12,269	6,135	6,134
Restaurant	0	-	See Trip Gen	0	0	0
Cinema/Entertainment	460	247,000	See Trip Gen	1,562	781	781
Residential	210,221,252	1,714	See Trip Gen	9,863	4,933	4,930
Hotel	310	1,000	See Trip Gen	10,863	5,432	5,431
All Other Land Uses[2]	150	-	See Trip Gen	0	0	0
Total				42,013	21,009	21,004

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		491	0	0	75	0
Retail	123		0	203	1595	307
Restaurant	0	0		0	0	0
Cinema/Entertainment	16	164	0		62	16
Residential	197	614	0	0		148
Hotel	0	123	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	42,013	21,009	21,004
Internal Capture Percentage	20%	20%	20%
External Vehicle-Trips[3]	33,745	16,875	16,870
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	9%	15%
Retail	23%	36%
Restaurant	N/A	N/A
Cinema/Entertainment	26%	33%
Residential	35%	19%
Hotel	9%	2%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

2Total estimate for all other land uses at mixed-use develoDailyent site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Reeves Creek DRI #TBD
Analysis Period:	**Daily (PM Peak Hour Rates)**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	3,728	3728	1.00	3,728	3728
Retail	1.00	6,135	6135	1.00	6,134	6134
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	781	781	1.00	781	781
Residential	1.00	4,933	4933	1.00	4,930	4930
Hotel	1.00	5,432	5432	1.00	5,431	5431

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		746	149	0	75	0
Retail	123		1779	245	1595	307
Restaurant	0	0		0	0	0
Cinema/Entertainment	16	164	242		62	16
Residential	197	2071	1035	0		148
Hotel	0	869	3693	0	109	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		491	0	8	197	0
Retail	1156		0	203	2269	923
Restaurant	1118	3068		250	789	3857
Cinema/Entertainment	224	245	0		197	54
Residential	2125	614	0	0		652
Hotel	0	123	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	336	3392	3728	3392	0	0
Retail	1392	4743	6135	4743	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	203	578	781	578	0	0
Residential	1732	3201	4933	3201	0	0
Hotel	471	4961	5432	4961	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	566	3162	3728	3162	0	0
Retail	2228	3906	6134	3906	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	258	523	781	523	0	0
Residential	959	3971	4930	3971	0	0
Hotel	123	5308	5431	5308	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

3Total estimate for all other land uses at mixed-use develoDailyent site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Reeves Creek DRI #TBD	**Organization:**	Lowe Engineers
Project Location:	Stockbridge, GA		
Scenario Description:	Future with Project - Phase 1		
Analysis Year:	2029		
Analysis Period:	**AM Peak Hour**		

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,760	720,000	See Trip Gen	651	556	95
Retail	820,945	169,250	See Trip Gen	481	271	210
Restaurant	0	-	See Trip Gen	0	0	0
Cinema/Entertainment	460	247,000	See Trip Gen	138	119	19
Residential	210,221,252	1,714	See Trip Gen	619	166	453
Hotel	310	1,000	See Trip Gen	495	292	203
All Other Land Uses[2]	150	-	See Trip Gen	0	0	0
Total				2,384	1,404	980

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment	1.00			1.00		
Residential	1.00			1.00		
Hotel	1.00			1.00		
All Other Land Uses[2]	1.00			1.00		

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		27	0	0	0	0
Retail	22		0	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	5	0	0		0
Hotel	17	11	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,384	1,404	980
Internal Capture Percentage	8%	7%	10%
External Vehicle-Trips[3]	2,196	1,310	886
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	9%	28%
Retail	16%	12%
Restaurant	N/A	N/A
Cinema/Entertainment	0%	0%
Residential	2%	3%
Hotel	0%	14%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Reeves Creek DRI #TBD
Analysis Period:	**AM Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	556	556	1.00	95	95
Retail	1.00	271	271	1.00	210	210
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	119	119	1.00	19	19
Residential	1.00	166	166	1.00	453	453
Hotel	1.00	292	292	1.00	203	203

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		27	60	0	1	0
Retail	61		27	0	29	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	5	91	0		0
Hotel	152	28	18	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		87	0	0	0	0
Retail	22		0	0	3	0
Restaurant	78	22		0	8	12
Cinema/Entertainment	0	0	0		0	0
Residential	17	46	0	0		0
Hotel	17	11	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	48	508	556	508	0	0
Retail	43	228	271	228	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	119	119	119	0	0
Residential	3	163	166	163	0	0
Hotel	0	292	292	292	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	27	68	95	68	0	0
Retail	25	185	210	185	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	19	19	19	0	0
Residential	14	439	453	439	0	0
Hotel	28	175	203	175	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Reeves Creek DRI #TBD	**Organization:**	Lowe Engineers
Project Location:	Stockbridge, GA		
Scenario Description:	Future with Project - Phase 1		
Analysis Year:	2029		
Analysis Period:	**PM Peak Hour**		

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,760	720,000	See Trip Gen	697	111	586
Retail	820,945	169,250	See Trip Gen	1,054	514	540
Restaurant	0	-	See Trip Gen	0	0	0
Cinema/Entertainment	460	247,000	See Trip Gen	175	28	147
Residential	210,221,252	1,714	See Trip Gen	785	478	307
Hotel	310	1,000	See Trip Gen	724	369	355
All Other Land Uses[2]	150	-	See Trip Gen	0	0	0
Total				3,435	1,500	1,935

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		41	0	0	12	0
Retail	11		0	7	140	27
Restaurant	0	0		0	0	0
Cinema/Entertainment	3	21	0		12	3
Residential	12	51	0	0		9
Hotel	0	10	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	3,435	1,500	1,935
Internal Capture Percentage	21%	24%	19%
External Vehicle-Trips[3]	2,717	1,141	1,576
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	23%	9%
Retail	24%	34%
Restaurant	N/A	N/A
Cinema/Entertainment	25%	27%
Residential	34%	23%
Hotel	11%	3%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Reeves Creek DRI #TBD
Analysis Period:	**PM Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	111	111	1.00	586	586
Retail	1.00	514	514	1.00	540	540
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	28	28	1.00	147	147
Residential	1.00	478	478	1.00	307	307
Hotel	1.00	369	369	1.00	355	355

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		117	23	0	12	0
Retail	11		157	22	140	27
Restaurant	0	0		0	0	0
Cinema/Entertainment	3	31	46		12	3
Residential	12	129	64	0		9
Hotel	0	57	241	0	7	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		41	0	0	19	0
Retail	34		0	7	220	63
Restaurant	33	257		9	76	262
Cinema/Entertainment	7	21	0		19	4
Residential	63	51	0	0		44
Hotel	0	10	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	26	85	111	85	0	0
Retail	123	391	514	391	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	7	21	28	21	0	0
Residential	164	314	478	314	0	0
Hotel	39	330	369	330	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	53	533	586	533	0	0
Retail	185	355	540	355	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	39	108	147	108	0	0
Residential	72	235	307	235	0	0
Hotel	10	345	355	345	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
210- Single-Family Detached Housing					**282**	**Dwelling Unit**
Daily		2,699	1,350	1,349	Ln(T) = 0.92Ln(X)+2.71	50% / 50%
AM Peak Hour		205	51	154	T = 0.71(X) + 4.80	25% / 75%
PM Peak Hour		275	173	102	Ln(T) = 0.96Ln(X)+0.20	63% / 37%
Reductions for Internal Capture						
Daily	39%	1,060	669	391		
AM Peak Hour	3%	6	1	5		
PM Peak Hour	47%	128	90	38		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,639	681	958		
AM Peak Hour		199	50	149		
PM Peak Hour		147	83	64		
221- Multifamily Housing (Mid-Rise)					**1,003**	**Dwelling Unit**
Daily		5,465	2,733	2,732	T=5.45(X) - 1.75	50% / 50%
AM Peak Hour		328	85	243	Ln(T) = 0.98Ln(X)-0.98	26% / 74%
PM Peak Hour		405	247	158	Ln(T) = 0.96Ln(X)-0.63	61% / 39%
Reductions for Internal Capture						
Daily	39%	2,145	1,353	792		
AM Peak Hour	3%	10	2	8		
PM Peak Hour	46%	188	129	59		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		3,320	1,380	1,940		
AM Peak Hour		318	83	235		
PM Peak Hour		217	118	99		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
252- Senior Adult Housing—Attached					**429**	**Dwelling Unit**
Daily		1,699	850	849	T = 4.02(X) - 25.37	50% / 50%
AM Peak Hour		86	30	56	T = 0.2(X) - 0.18	35% / 65%
PM Peak Hour		105	58	47	T = 0.24(X) + 2.26	55% / 45%
Reductions for Internal Capture						
Daily	39%	667	421	246		
AM Peak Hour	3%	3	1	2		
PM Peak Hour	45%	47	30	17		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,032	429	603		
AM Peak Hour		83	29	54		
PM Peak Hour		58	28	30		
310- Hotel					**1,000**	**Rooms**
Daily		10,863	5,432	5,431	T = 11.29(X) - 426.97	50% / 50%
AM Peak Hour		495	292	203	T = 0.50(X) - 5.34	59% / 41%
PM Peak Hour		724	369	355	T = 0.75(X) - 26.02	51% / 49%
Reductions for Internal Capture						
Daily	8%	923	706	217		
AM Peak Hour	8%	39	0	39		
PM Peak Hour	11%	79	60	19		
Reductions for Modal Split						
Daily	5%	497	236	261		
AM Peak Hour	5%	23	15	8		
PM Peak Hour	5%	32	15	17		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		9,443	4,490	4,953		
AM Peak Hour		433	277	156		
PM Peak Hour		613	294	319		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
460- Arena					**247,000**	**1000 S.F.**
*NON Daily		1,562	781	781		50% / 50%
EVENT AM Peak Hour		138	119	19		86% / 14%
PM Peak Hour		175	28	147		16% / 84%
Reductions for Internal Capture						
Daily	30%	461	203	258		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	32%	56	7	49		
Reductions for Modal Split						
Daily	5%	55	29	26		
AM Peak Hour	5%	7	6	1		
PM Peak Hour	5%	6	1	5		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,046	549	497		
AM Peak Hour		131	113	18		
PM Peak Hour		113	20	93		
710- General Office Building					**620,000**	**1000 S.F.**
Daily		6,228	3,114	3,114	Ln(T) = 0.97Ln(X)+2.50	50% / 50%
AM Peak Hour		609	524	85	T=0.94(X) + 26.49	86% / 14%
PM Peak Hour		644	103	541	Ln(T) = 0.95Ln(X)+0.36	16% / 84%
Reductions for Internal Capture						
Daily	13%	783	239	544		
AM Peak Hour	11%	67	43	24		
PM Peak Hour	11%	74	16	58		
Reductions for Modal Split						
Daily	5%	272	144	128		
AM Peak Hour	5%	27	24	3		
PM Peak Hour	5%	29	4	25		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		5,173	2,731	2,442		
AM Peak Hour		515	457	58		
PM Peak Hour		541	83	458		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
720- Medical-Dental Office Building					**100,000**	**1000 S.F.**
Daily		3,754	1,877	1,877	T=38.42(X) - 87.62	50% / 50%
AM Peak Hour		223	176	47	Ln(T) = 0.89Ln(X)+1.31	78% / 22%
PM Peak Hour		401	112	289	T=3.39(X) + 2.02	28% / 72%
Reductions for Internal Capture						
Daily	13%	472	144	328		
AM Peak Hour	12%	27	14	13		
PM Peak Hour	12%	48	17	31		
Reductions for Modal Split						
Daily	5%	164	87	77		
AM Peak Hour	5%	10	8	2		
PM Peak Hour	5%	18	5	13		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		3,118	1,646	1,472		
AM Peak Hour		186	154	32		
PM Peak Hour		335	90	245		
760- Research and Development Center					**100,000**	**1000 S.F.**
Daily		1,228	614	614	T=10.23(X) + 204.68	50% / 50%
AM Peak Hour		42	32	10	T=0.42(X)	75% / 25%
PM Peak Hour		53	8	45	Ln(T) = 0.89Ln(X)+1.31	15% / 85%
Reductions for Internal Capture						
Daily	13%	154	47	107		
AM Peak Hour	14%	6	3	3		
PM Peak Hour	11%	6	1	5		
Reductions for Modal Split						
Daily	5%	54	28	26		
AM Peak Hour	5%	2	1	1		
PM Peak Hour	5%	2	0	2		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		1,020	539	481		
AM Peak Hour		34	28	6		
PM Peak Hour		45	7	38		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
862- Home Improvement Superstore					**100,000**	**1000 S.F.**
Daily		3,074	1,537	1,537	T = 30.74(X)	50% / 50%
AM Peak Hour		157	89	68	T = 1.57(X)	57% / 43%
PM Peak Hour		233	114	119	T = 2.33(X)	49% / 51%
Reductions for Internal Capture						
Daily	26%	789	331	458		
AM Peak Hour	13%	20	13	7		
PM Peak Hour	27%	63	27	36		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	21%	480	253	227		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	42%	71	37	34		
Net New External Vehicle Trips						
Daily		1,805	953	852		
AM Peak Hour		137	76	61		
PM Peak Hour		99	50	49		
820- Shopping Center					**169,250**	**1000 S.F.**
Daily		8,598	4,299	4,299	Ln(T) = 0.68Ln(X)+5.57	50% / 50%
AM Peak Hour		236	146	90	T = 0.5(X) + 151.78	62% / 38%
PM Peak Hour		802	385	417	Ln(T) = 0.74Ln(X)+2.89	48% / 52%
Reductions for Internal Capture						
Daily	26%	2,207	925	1,282		
AM Peak Hour	13%	30	21	9		
PM Peak Hour	27%	217	90	127		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	26%	2,235	1,118	1,117		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	34%	273	131	142		
Net New External Vehicle Trips						
Daily		4,156	2,256	1,900		
AM Peak Hour		206	125	81		
PM Peak Hour		312	164	148		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
857- Discount Club					**135,000**	**1000 S.F.**
Daily		5,643	2,822	2,821	T = 41.80(X)	50% / 50%
AM Peak Hour		66	46	20	T = 0.49(X)	70% / 30%
PM Peak Hour		564	282	282	T = 4.18(X)	50% / 50%
Reductions for Internal Capture						
Daily	26%	1,448	607	841		
AM Peak Hour	14%	9	7	2		
PM Peak Hour	27%	152	66	86		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	19%	776	410	366		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	37%	152	80	72		
Net New External Vehicle Trips						
Daily		3,419	1,805	1,614		
AM Peak Hour		57	39	18		
PM Peak Hour		260	136	124		
890- Furniture Store					**125,000**	**1000 S.F.**
Daily		693	347	346	T = 5.17(X) + 46.56	50% / 50%
AM Peak Hour		31	22	9	T = 0.24(X) + 0.94	71% / 29%
PM Peak Hour		51	24	27	Ln(T) = 0.85 Ln(X) - 0.18	47% / 53%
Reductions for Internal Capture						
Daily	26%	178	75	103		
AM Peak Hour	13%	4	3	1		
PM Peak Hour	27%	14	6	8		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	27%	187	94	93		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	53%	27	13	14		
Net New External Vehicle Trips						
Daily		328	178	150		
AM Peak Hour		27	19	8		
PM Peak Hour		10	5	5		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
945- Gasoline/Service Station with Convenience Market					**18**	**Pumps**
Daily		3,671	1,836	1,835	T = 268.46(X) - 1161	50% / 50%
AM Peak Hour		245	125	120	T = 19(X) - 96.53	51% / 49%
PM Peak Hour		252	129	123	T = 13.99(X)	51% / 49%
Reductions for Internal Capture						
Daily	26%	942	395	547		
AM Peak Hour	13%	31	18	13		
PM Peak Hour	27%	67	30	37		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	59%	2,166	1,083	1,083		
AM Peak Hour	62%	152	78	74		
PM Peak Hour	56%	141	72	69		
Net New External Vehicle Trips						
Daily		563	358	205		
AM Peak Hour		62	29	33		
PM Peak Hour		44	27	17		
090- Park-and-Ride Lot with Bus or Light Rail Service Industrial					**300**	**Lanes**
Daily		917	459	458	Ln(T) = 0.74*LN(X) + 2.60	50% / 50%
AM Peak Hour		119	84	35	Ln(T) = 0.85*LN(X) - 0.07	71% / 29%
PM Peak Hour		143	36	107	T = 0.37(X) + 31.82	25% / 75%
Reductions for Internal Capture						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Modal Split						
Daily	1%	9	5	4		
AM Peak Hour	1%	1	1	0		
PM Peak Hour	1%	1	0	1		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		908	454	454		
AM Peak Hour		118	83	35		
PM Peak Hour		142	36	106		

Project Trip Generation

Reeves Creek DRI #TBD - Stockbridge, GA

Calculations based upon methodology from ITE's Trip Generation Manual, 10th Edition (2017)

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
150- Warehousing					**150,000**	**1000 S.F.**
Daily		283	142	141	T=1.58(X) + 45.54	50% / 50%
AM Peak Hour		43	33	10	T=0.12(X) + 25.32	77% / 23%
PM Peak Hour		46	12	34	T=0.12(X) + 27.82	27% / 73%
Reductions for Internal Capture						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Modal Split						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Reductions for Pass-By Trips						
Daily	0%	0	0	0		
AM Peak Hour	0%	0	0	0		
PM Peak Hour	0%	0	0	0		
Net New External Vehicle Trips						
Daily		283	142	141		
AM Peak Hour		43	33	10		
PM Peak Hour		46	12	34		

Total Trip Generation					
Daily		56,377	28,193	28,184	210- Single-Family Detached Housing
AM Peak Hour		3,023	1,854	1,169	221- Multifamily Housing (Mid-Rise)
PM Peak Hour		4,873	2,080	2,793	252- Senior Adult Housing—Attached
Reductions for Internal Capture					310- Hotel
Daily	22%	12,229	6,115	6,114	460- Arena
AM Peak Hour	8%	252	126	126	710- General Office Building
PM Peak Hour	23%	1,139	569	570	720- Medical-Dental Office Building
Reductions for Modal Split					760- Research and Development Center
Daily	2%	1,051	529	522	862- Home Improvement Superstore
AM Peak Hour	2%	70	55	15	820- Shopping Center
PM Peak Hour	2%	88	25	63	857- Discount Club
Reductions for Pass-By Trips					890- Furniture Store
Daily	10%	5,844	2,958	2,886	945- Gasoline/Service Station with Convenience Market
AM Peak Hour	5%	152	78	74	090- Park-and-Ride Lot with Bus or Light Rail Service Industrial
PM Peak Hour	14%	664	333	331	
Net New External Vehicle Trips					
Daily		37,253	18,591	18,662	
AM Peak Hour		2,549	1,595	954	
PM Peak Hour		2,982	1,153	1,829	

Note: '1 Where: T = Trips; X = Density by Variable

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Reeves Creek DRI #TBD	**Organization:**	Lowe Engineers
Project Location:	Stockbridge, GA		
Scenario Description:	Future with Project - Phase 2		
Analysis Year:	2035		
Analysis Period:	**Daily (PM Peak Hour Rates)**		

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	DeveloDailyent Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,720,760	820,000	See Trip Gen	11,210	5,605	5,605
Retail	,820,857,890,	269,250	See Trip Gen	21,679	10,841	10,838
Restaurant	0	-	See Trip Gen	0	0	0
Cinema/Entertainment	460	247,000	See Trip Gen	1,562	781	781
Residential	210,221,252	1,714	See Trip Gen	9,863	4,933	4,930
Hotel	310	1,000	See Trip Gen	10,863	5,432	5,431
All Other Land Uses[2]	090,150	-	See Trip Gen	0	0	0
Total				55,177	27,592	27,585

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		867	0	0	112	0
Retail	217		0	203	2269	542
Restaurant	0	0		0	0	0
Cinema/Entertainment	16	164	0		62	16
Residential	197	1084	0	0		148
Hotel	0	217	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	55,177	27,592	27,585
Internal Capture Percentage	22%	22%	22%
External Vehicle-Trips[3]	42,949	21,478	21,471
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	8%	17%
Retail	22%	30%
Restaurant	N/A	N/A
Cinema/Entertainment	26%	33%
Residential	50%	29%
Hotel	13%	4%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

2Total estimate for all other land uses at mixed-use develoDailyent site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Reeves Creek DRI #TBD
Analysis Period:	**Daily (PM Peak Hour Rates)**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	5,605	5605	1.00	5,605	5605
Retail	1.00	10,841	10841	1.00	10,838	10838
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	781	781	1.00	781	781
Residential	1.00	4,933	4933	1.00	4,930	4930
Hotel	1.00	5,432	5432	1.00	5,431	5431

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1121	224	0	112	0
Retail	217		3143	434	2818	542
Restaurant	0	0		0	0	0
Cinema/Entertainment	16	164	242		62	16
Residential	197	2071	1035	0		148
Hotel	0	869	3693	0	109	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		867	0	8	197	0
Retail	1738		0	203	2269	923
Restaurant	1682	5421		250	789	3857
Cinema/Entertainment	336	434	0		197	54
Residential	3195	1084	0	0		652
Hotel	0	217	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	430	5175	5605	5175	0	0
Retail	2332	8509	10841	8509	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	203	578	781	578	0	0
Residential	2443	2490	4933	2490	0	0
Hotel	706	4726	5432	4726	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	979	4626	5605	4626	0	0
Retail	3231	7607	10838	7607	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	258	523	781	523	0	0
Residential	1429	3501	4930	3501	0	0
Hotel	217	5214	5431	5214	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

3Total estimate for all other land uses at mixed-use develoDailyent site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Reeves Creek DRI #TBD	**Organization:**	Lowe Engineers
Project Location:	Stockbridge, GA		
Scenario Description:	Future with Project - Phase 2		
Analysis Year:	2035		
Analysis Period:	**AM Peak Hour**		

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,720,760	820,000	See Trip Gen	874	732	142
Retail	,820,857,890,	269,250	See Trip Gen	735	428	307
Restaurant	0	-	See Trip Gen	0	0	0
Cinema/Entertainment	460	247,000	See Trip Gen	138	119	19
Residential	210,221,252	1,714	See Trip Gen	619	166	453
Hotel	310	1,000	See Trip Gen	495	292	203
All Other Land Uses[2]	090,150	-	See Trip Gen	0	0	0
Total				2,861	1,737	1,124

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment	1.00			1.00		
Residential	1.00			1.00		
Hotel	1.00			1.00		
All Other Land Uses[2]	1.00			1.00		

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		40	0	0	0	0
Retail	29		0	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	5	0	0		0
Hotel	22	17	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,861	1,737	1,124
Internal Capture Percentage	9%	7%	11%
External Vehicle-Trips[3]	2,611	1,612	999
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	8%	28%
Retail	14%	10%
Restaurant	N/A	N/A
Cinema/Entertainment	0%	0%
Residential	2%	3%
Hotel	0%	19%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Reeves Creek DRI #TBD
Analysis Period:	**AM Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	732	732	1.00	142	142
Retail	1.00	428	428	1.00	307	307
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	119	119	1.00	19	19
Residential	1.00	166	166	1.00	453	453
Hotel	1.00	292	292	1.00	203	203

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		40	89	0	1	0
Retail	89		40	0	43	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	5	91	0		0
Hotel	152	28	18	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		137	0	0	0	0
Retail	29		0	0	3	0
Restaurant	102	34		0	8	12
Cinema/Entertainment	0	0	0		0	0
Residential	22	73	0	0		0
Hotel	22	17	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	60	672	732	672	0	0
Retail	62	366	428	366	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	119	119	119	0	0
Residential	3	163	166	163	0	0
Hotel	0	292	292	292	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	40	102	142	102	0	0
Retail	32	275	307	275	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	19	19	19	0	0
Residential	14	439	453	439	0	0
Hotel	39	164	203	164	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Reeves Creek DRI #TBD	**Organization:**	Lowe Engineers
Project Location:	Stockbridge, GA		
Scenario Description:	Future with Project - Phase 2		
Analysis Year:	2035		
Analysis Period:	**PM Peak Hour**		

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710,720,760	820,000	See Trip Gen	1,098	223	875
Retail	,820,857,890,	269,250	See Trip Gen	1,902	934	968
Restaurant	0	-	See Trip Gen	0	0	0
Cinema/Entertainment	460	247,000	See Trip Gen	175	28	147
Residential	210,221,252	1,714	See Trip Gen	785	478	307
Hotel	310	1,000	See Trip Gen	724	369	355
All Other Land Uses[2]	090,150	-	See Trip Gen	0	0	0
Total				4,684	2,032	2,652

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		75	0	0	18	0
Retail	19		0	7	220	48
Restaurant	0	0		0	0	0
Cinema/Entertainment	3	31	0		12	3
Residential	12	93	0	0		9
Hotel	0	19	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	4,684	2,032	2,652
Internal Capture Percentage	24%	28%	21%
External Vehicle-Trips[3]	3,546	1,463	2,083
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	15%	11%
Retail	23%	30%
Restaurant	N/A	N/A
Cinema/Entertainment	25%	33%
Residential	52%	37%
Hotel	16%	5%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Reeves Creek DRI #TBD
Analysis Period:	**PM Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	223	223	1.00	875	875
Retail	1.00	934	934	1.00	968	968
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	28	28	1.00	147	147
Residential	1.00	478	478	1.00	307	307
Hotel	1.00	369	369	1.00	355	355

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		175	35	0	18	0
Retail	19		281	39	252	48
Restaurant	0	0		0	0	0
Cinema/Entertainment	3	31	46		12	3
Residential	12	129	64	0		9
Hotel	0	57	241	0	7	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		75	0	0	19	0
Retail	69		0	7	220	63
Restaurant	67	467		9	76	262
Cinema/Entertainment	13	37	0		19	4
Residential	127	93	0	0		44
Hotel	0	19	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	34	189	223	189	0	0
Retail	218	716	934	716	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	7	21	28	21	0	0
Residential	250	228	478	228	0	0
Hotel	60	309	369	309	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	93	782	875	782	0	0
Retail	294	674	968	674	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	49	98	147	98	0	0
Residential	114	193	307	193	0	0
Hotel	19	336	355	336	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX F: NCHRP Turn Lane Warrants

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

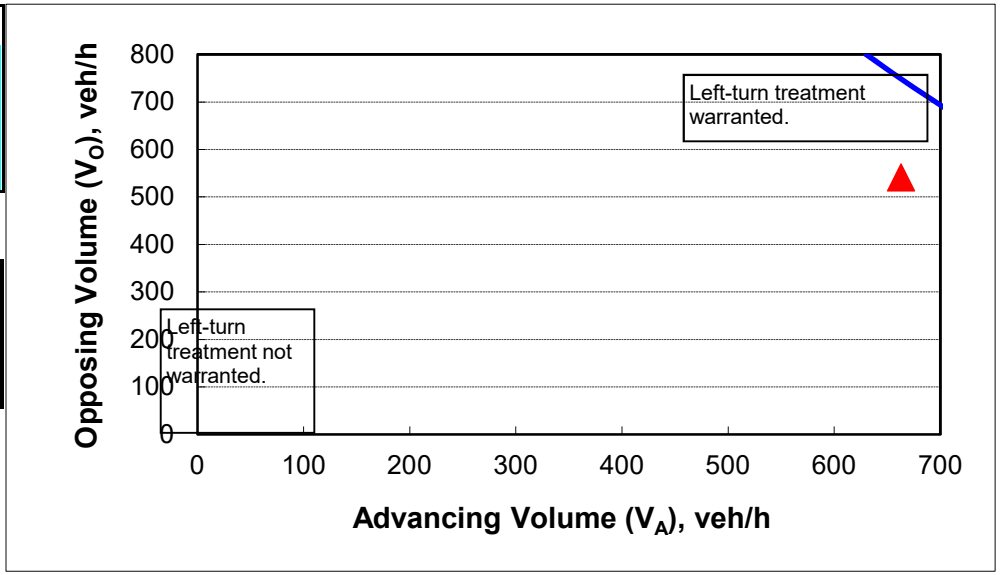
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	663
Opposing volume (V_O), veh/h:	541

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	816
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

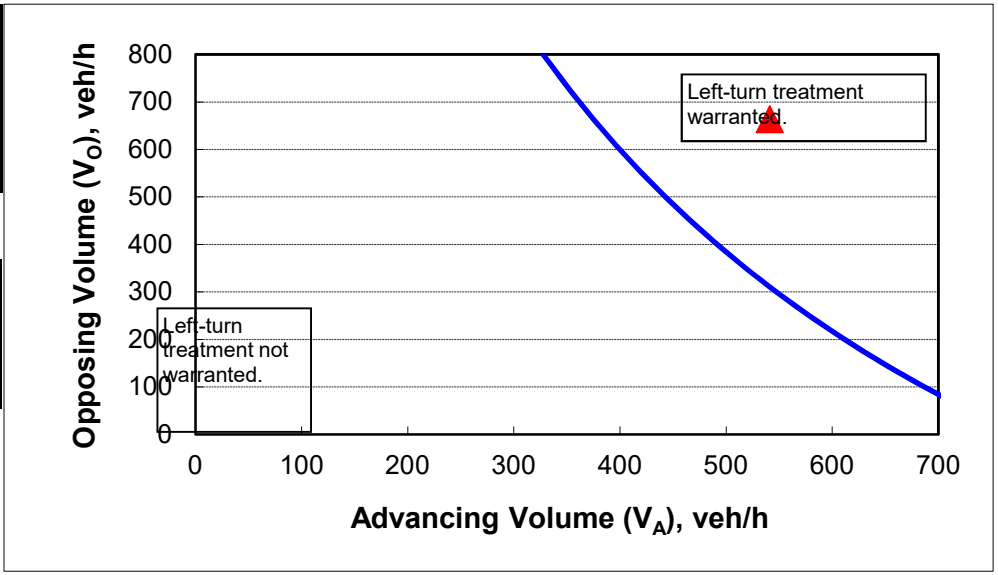
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	5%
Advancing volume (V_A), veh/h:	541
Opposing volume (V_O), veh/h:	663

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	375
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

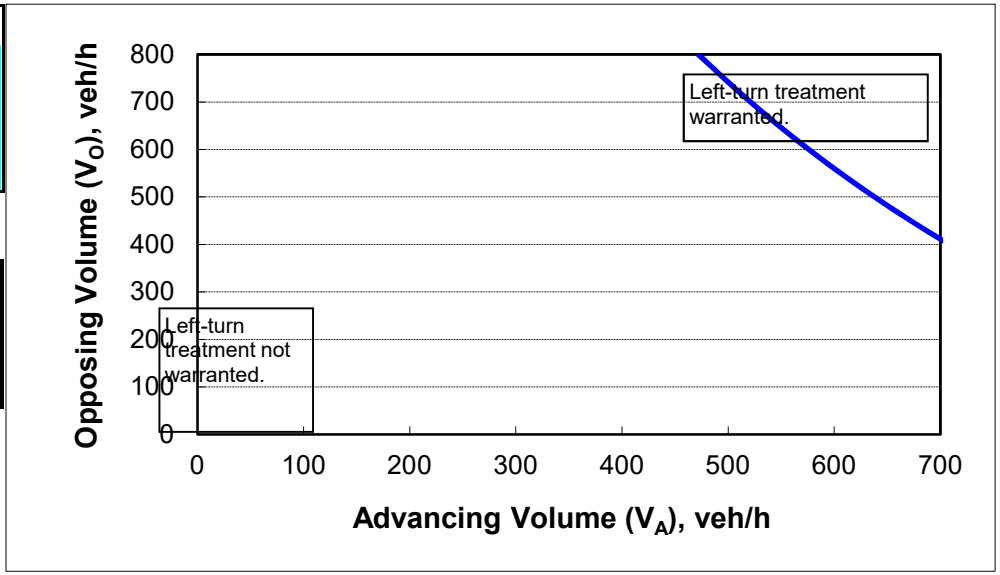
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	737
Opposing volume (V_O), veh/h:	1010

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	385
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

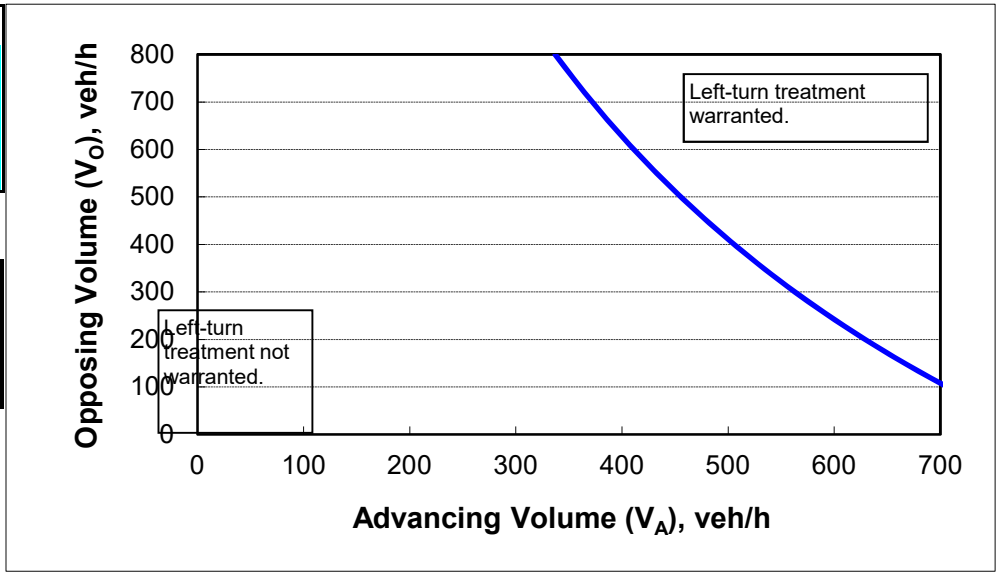
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	1010
Opposing volume (V_O), veh/h:	737

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	359
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1204
Percentage of right-turns on minor road, %:	39%
Minor-road volume (one direction), veh/h:	56

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	144
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

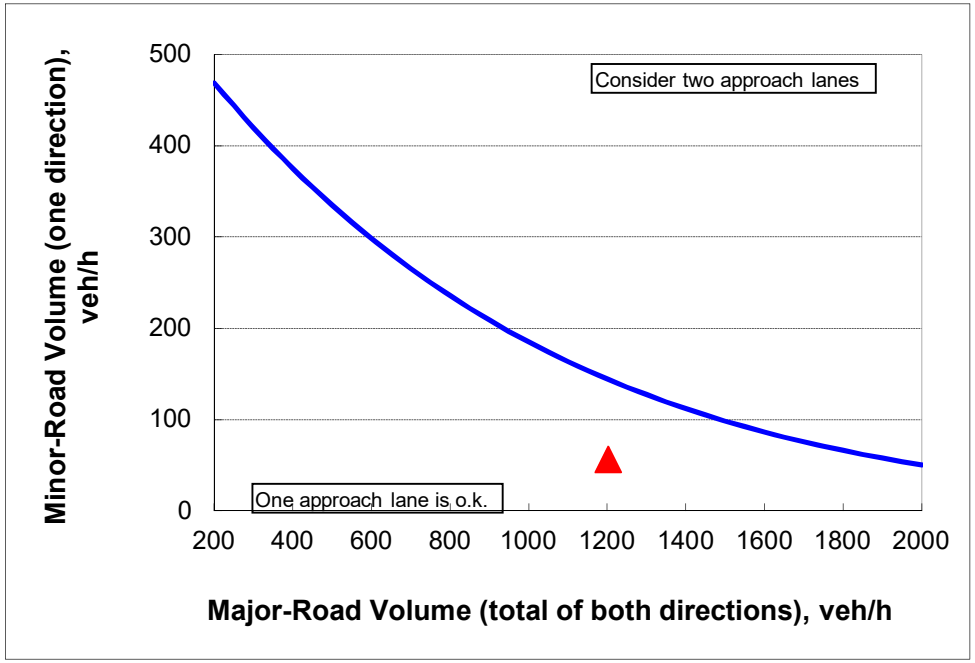


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1747
Percentage of right-turns on minor road, %:	38%
Minor-road volume (one direction), veh/h:	32

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	70
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

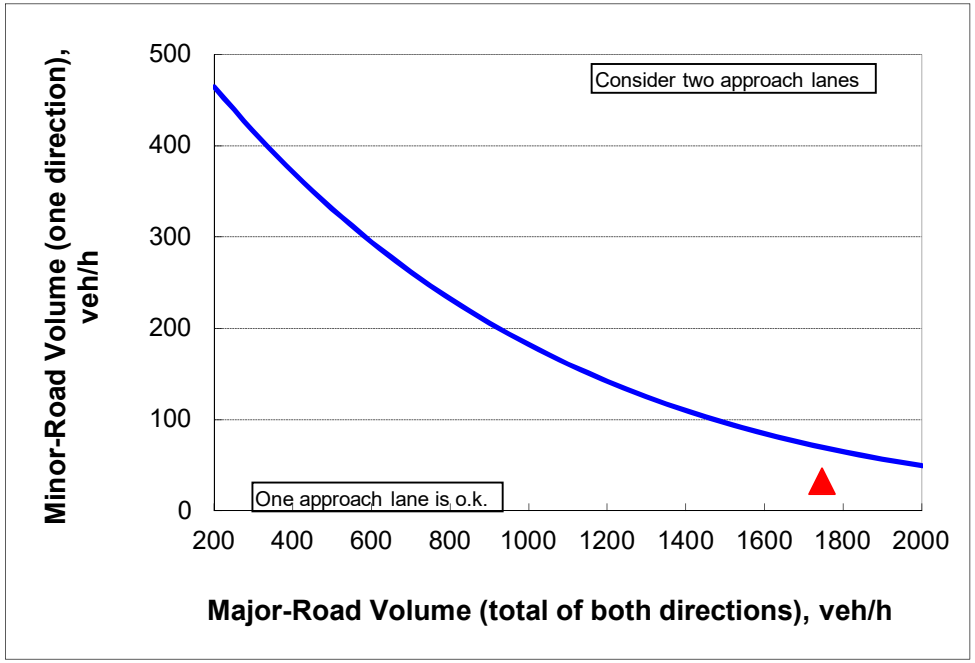


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1204
Percentage of right-turns on minor road, %:	72%
Minor-road volume (one direction), veh/h:	75

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	211
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

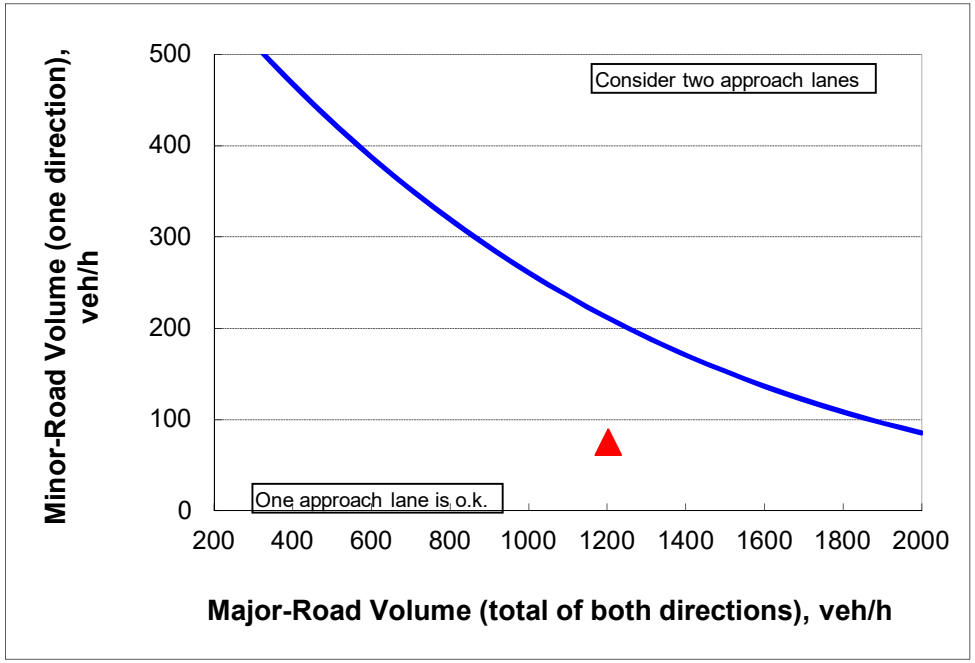


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1747
Percentage of right-turns on minor road, %:	74%
Minor-road volume (one direction), veh/h:	54

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	120
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

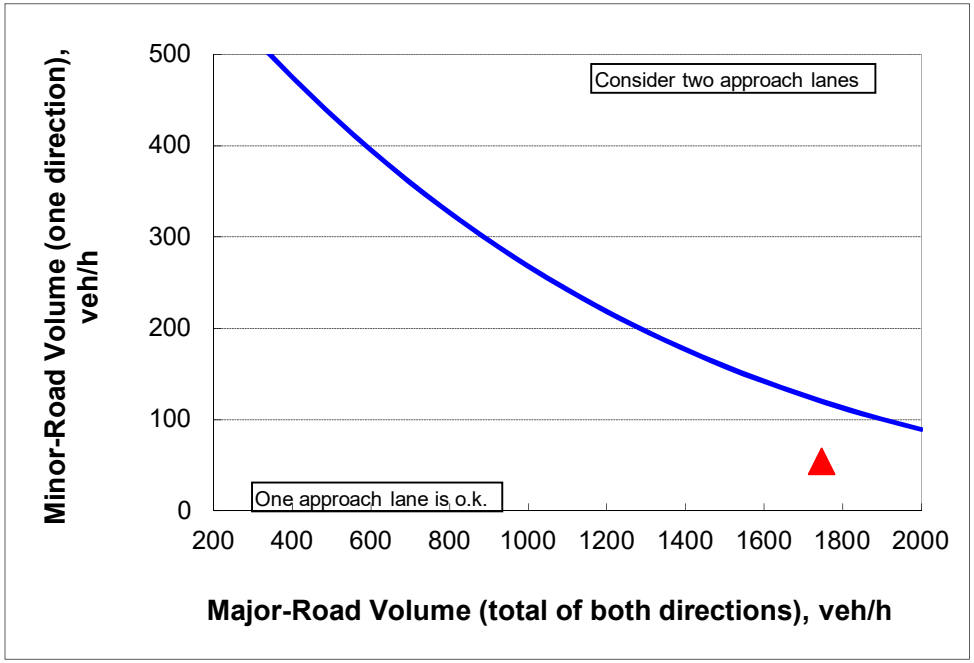


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1356
Percentage of right-turns on minor road, %:	37%
Minor-road volume (one direction), veh/h:	60

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	115
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

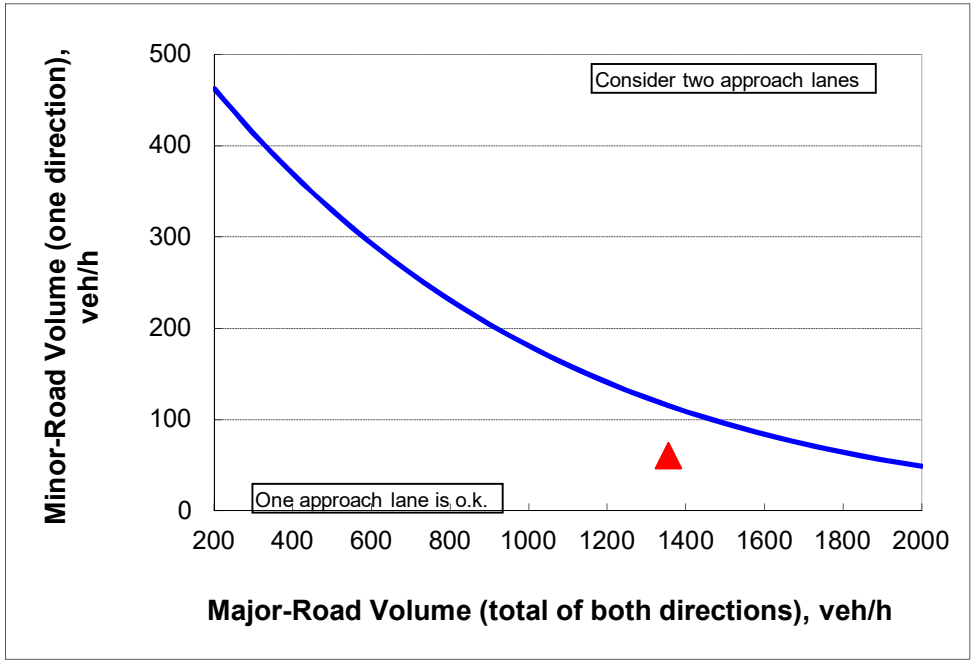


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1960
Percentage of right-turns on minor road, %:	24%
Minor-road volume (one direction), veh/h:	42

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	45
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

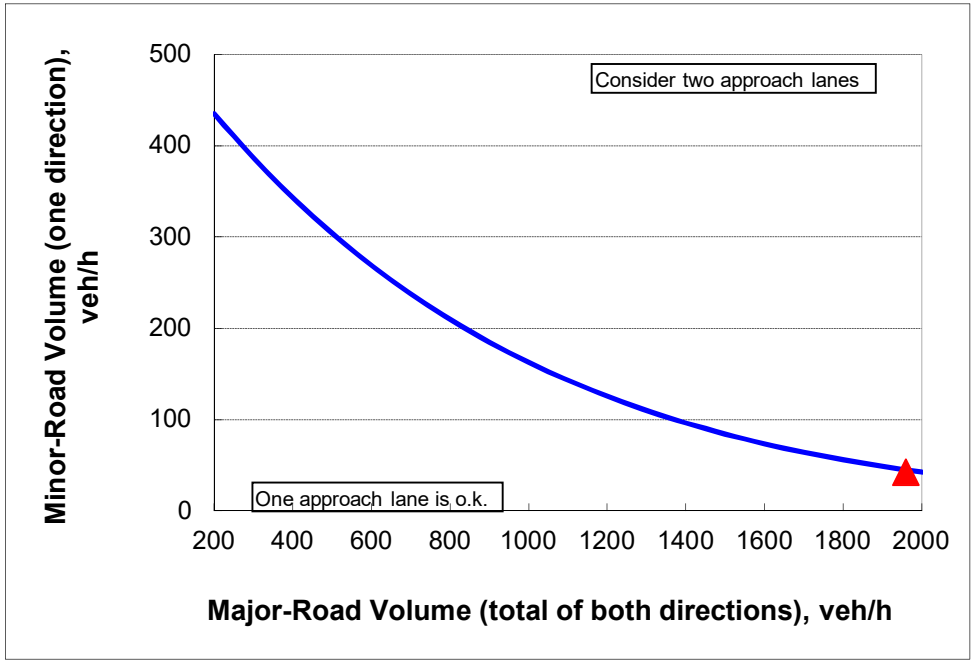


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1356
Percentage of right-turns on minor road, %:	80%
Minor-road volume (one direction), veh/h:	106

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	206
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

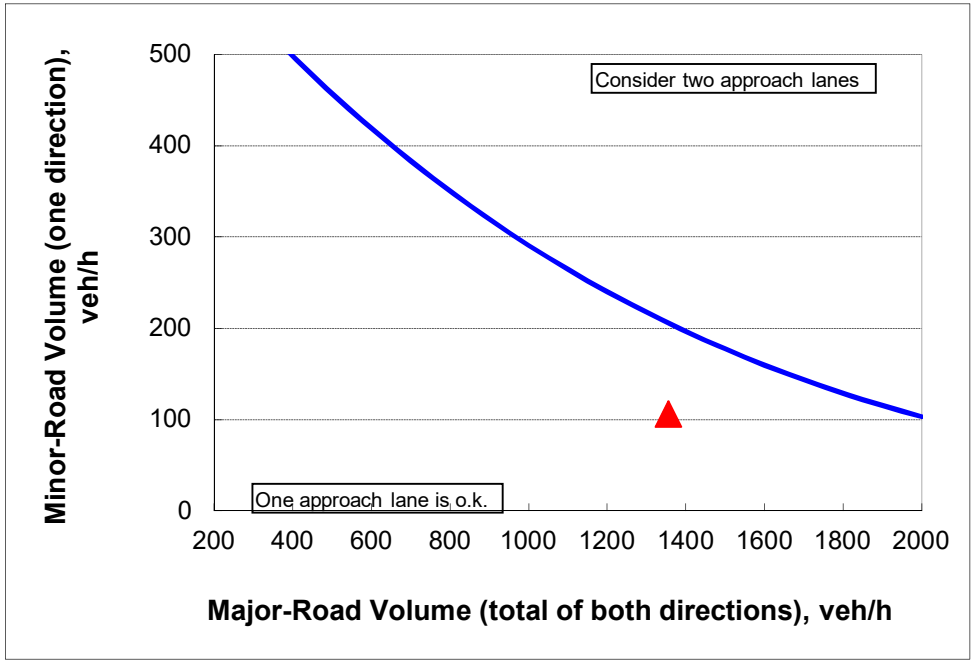


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1960
Percentage of right-turns on minor road, %:	84%
Minor-road volume (one direction), veh/h:	80

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	119
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

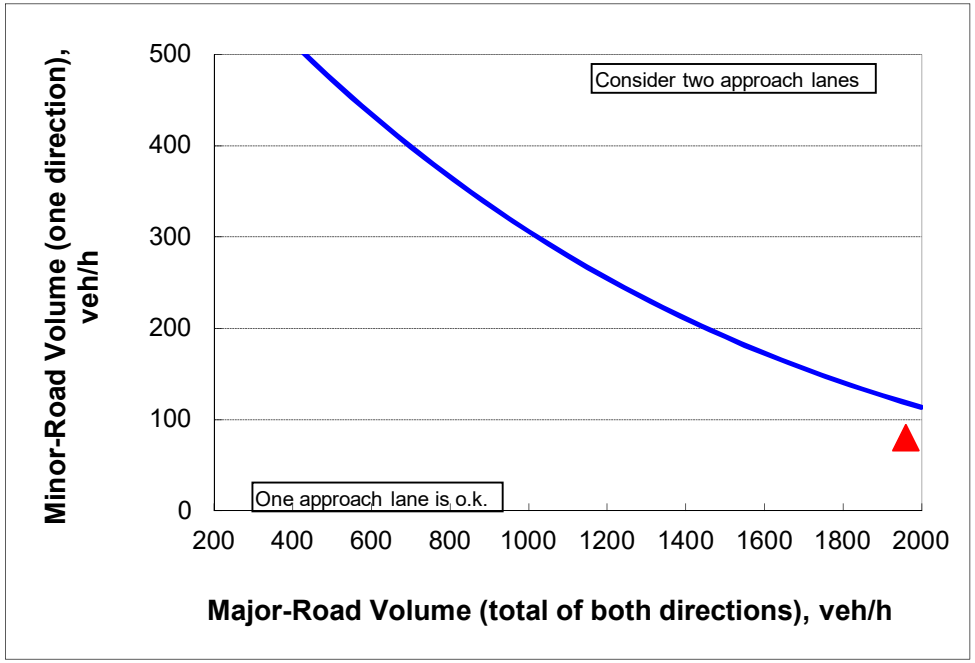


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	663
Right-turn volume, veh/h:	8

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	26
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

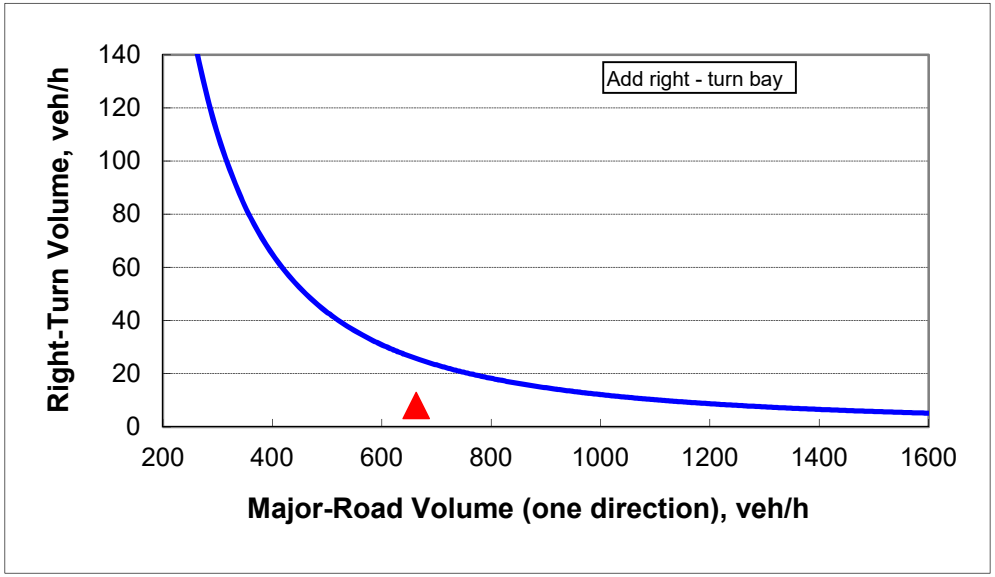


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	541
Right-turn volume, veh/h:	16

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	37
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

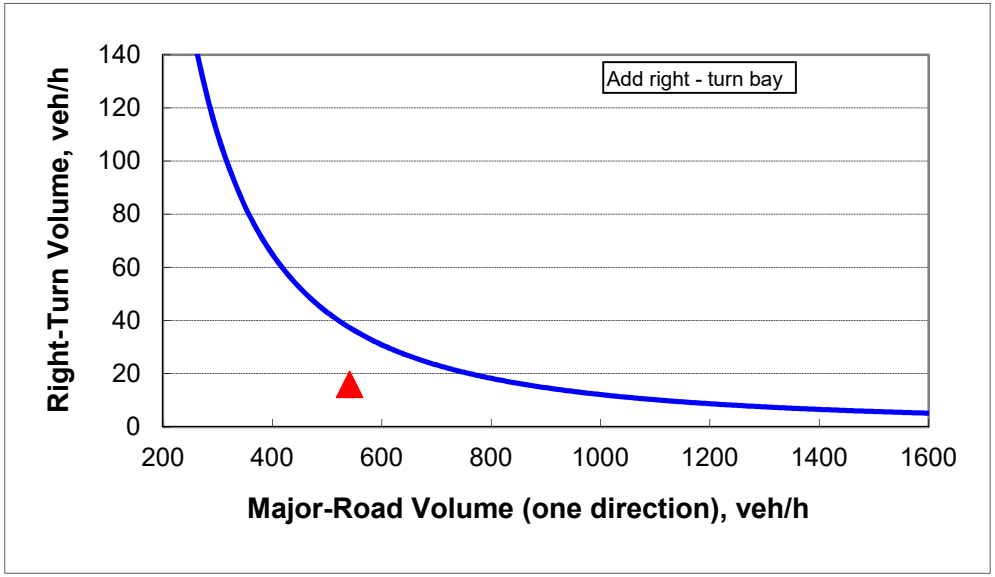


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	737
Right-turn volume, veh/h:	17

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	21
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

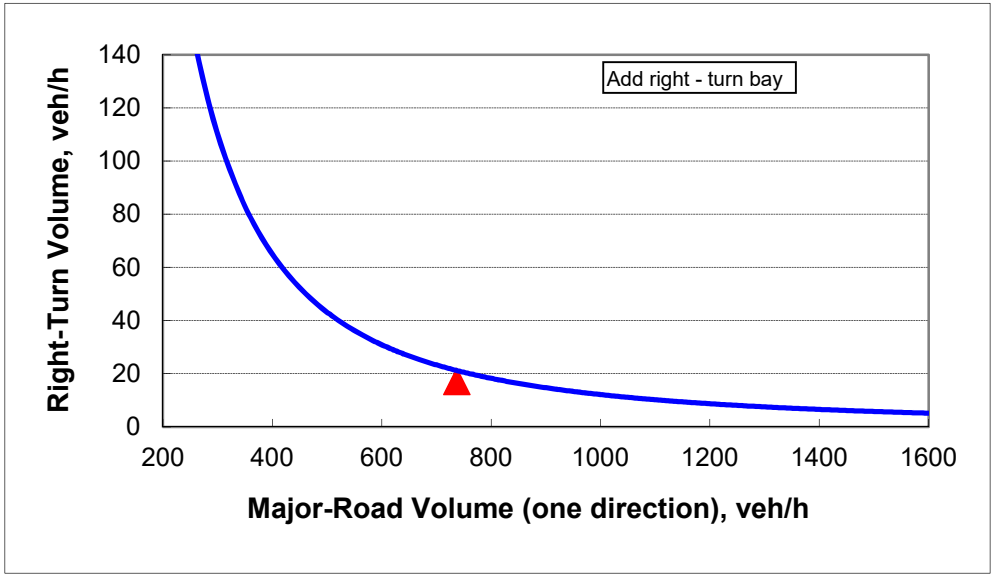


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	1010
Right-turn volume, veh/h:	28

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	12
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

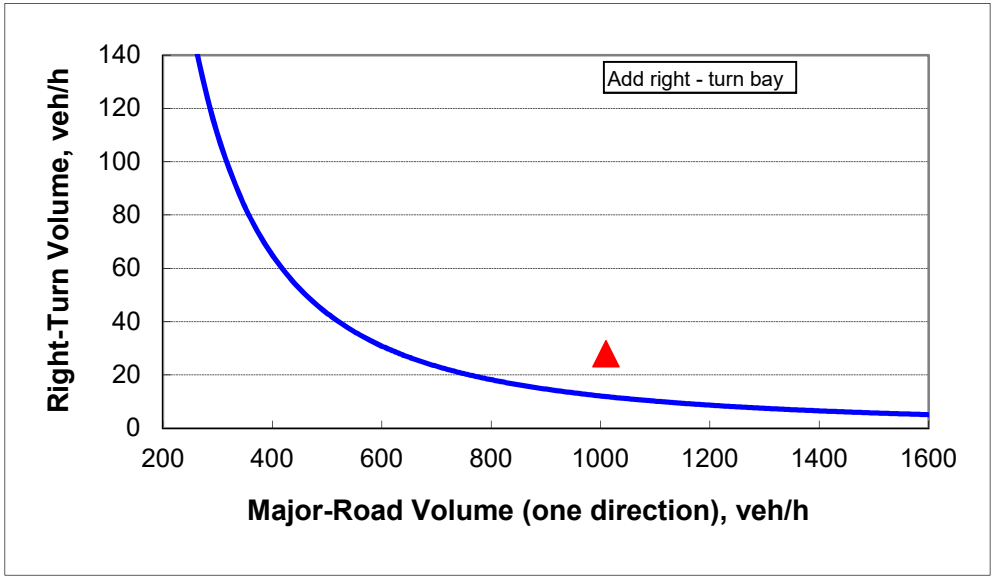


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	736
Right-turn volume, veh/h:	8

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	21
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

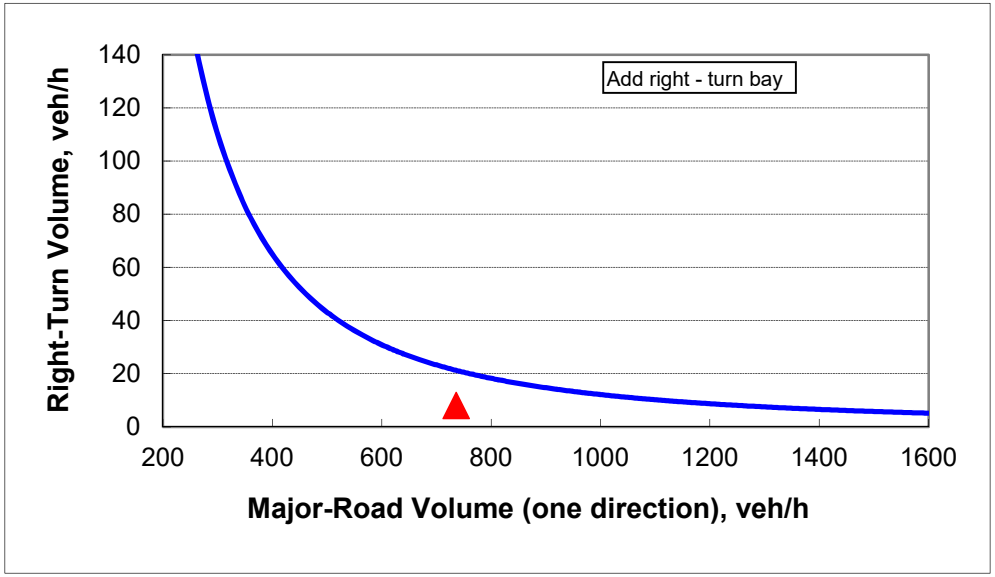


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	806
Right-turn volume, veh/h:	16

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	18
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

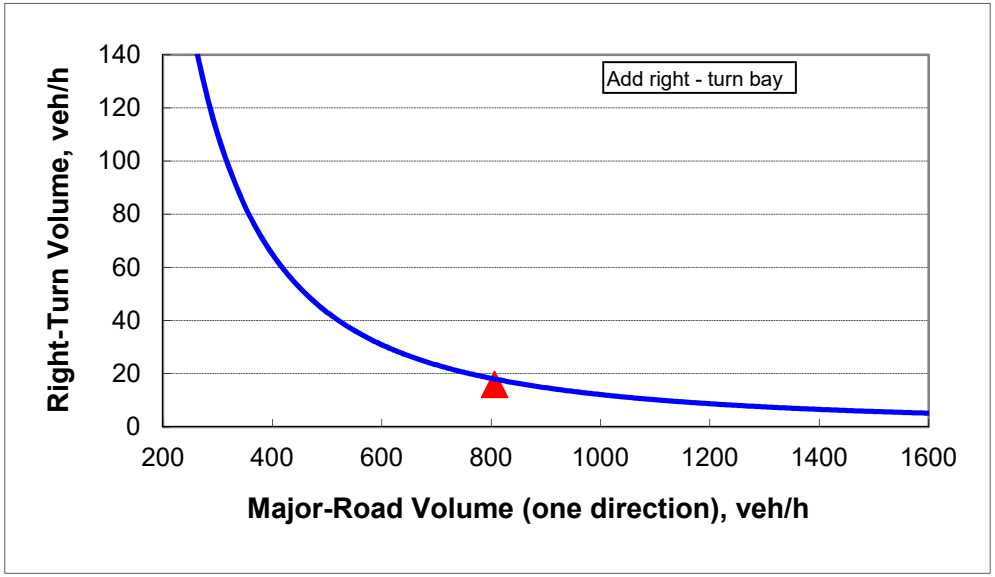


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

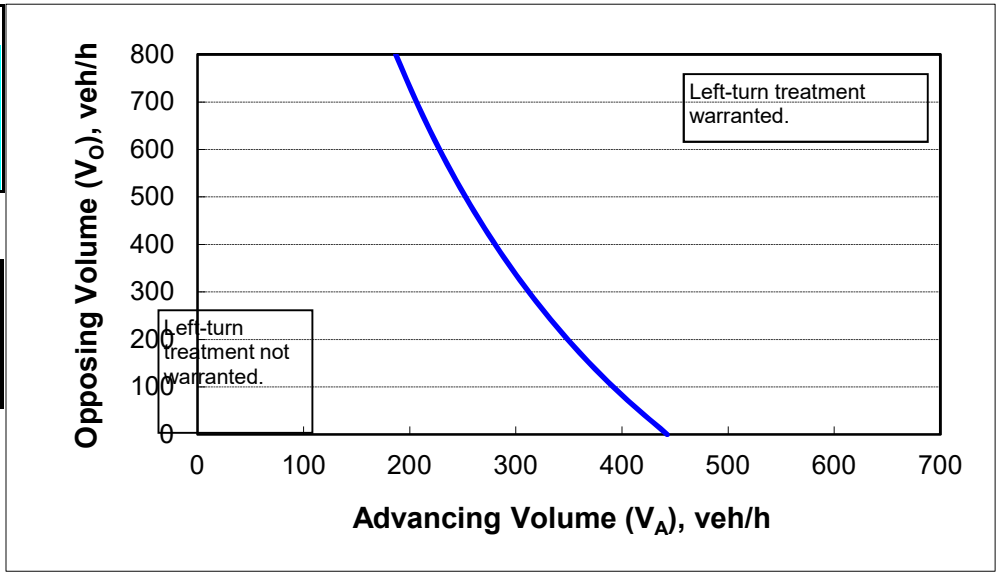
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	22%
Advancing volume (V_A), veh/h:	752
Opposing volume (V_O), veh/h:	238

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	334
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

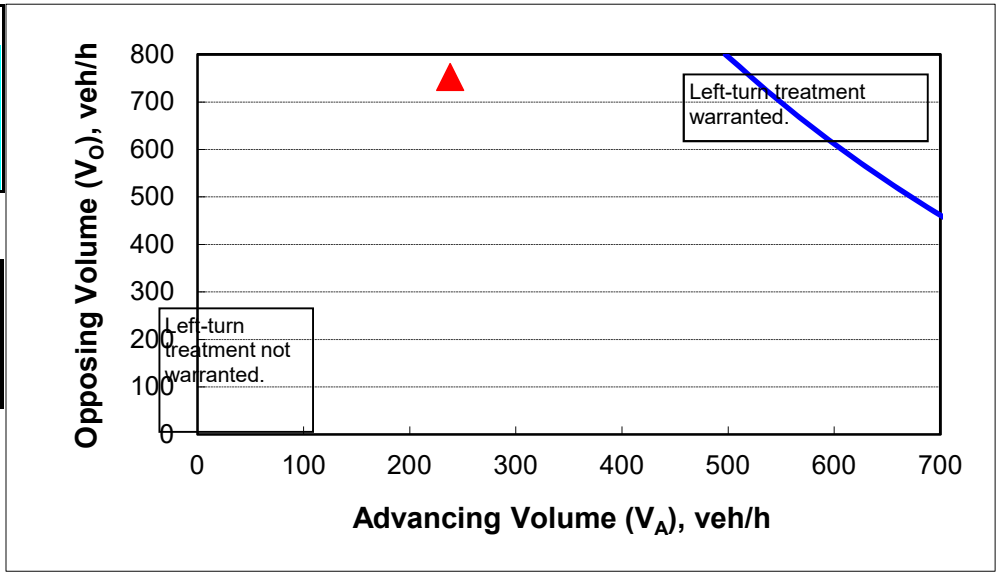
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	238
Opposing volume (V_O), veh/h:	752

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	522
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

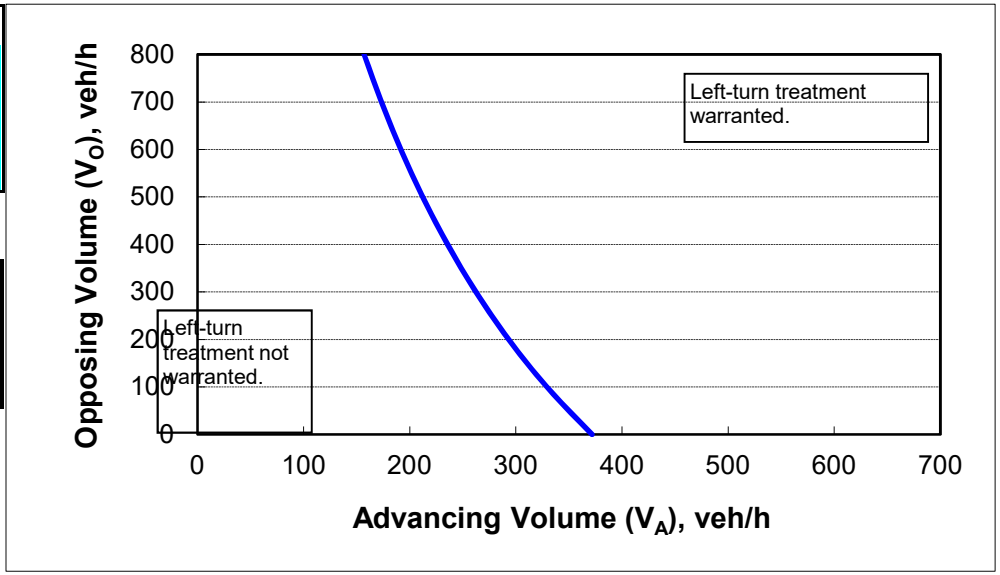
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	44%
Advancing volume (V_A), veh/h:	852
Opposing volume (V_O), veh/h:	608

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	190
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

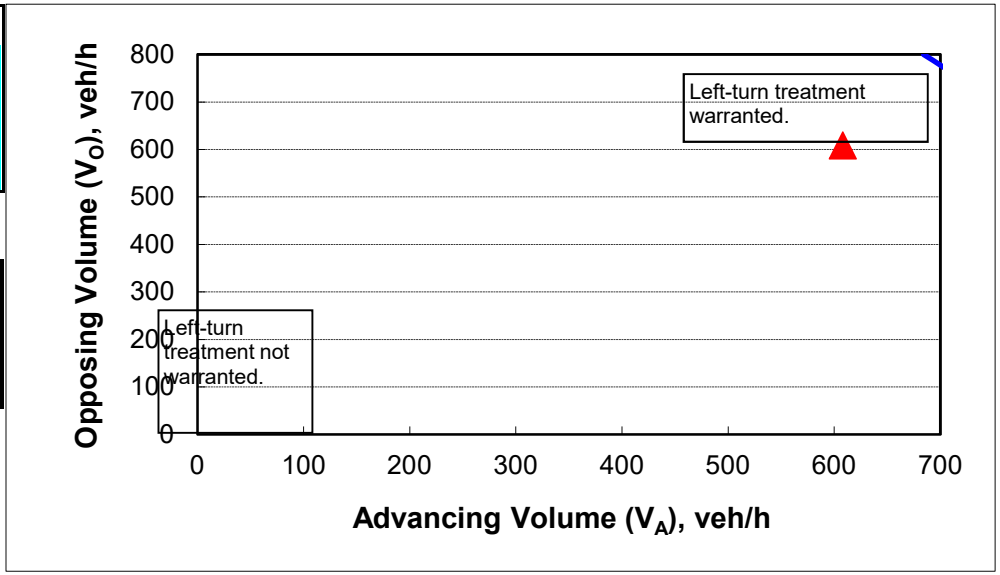
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	608
Opposing volume (V_O), veh/h:	608

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	829
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

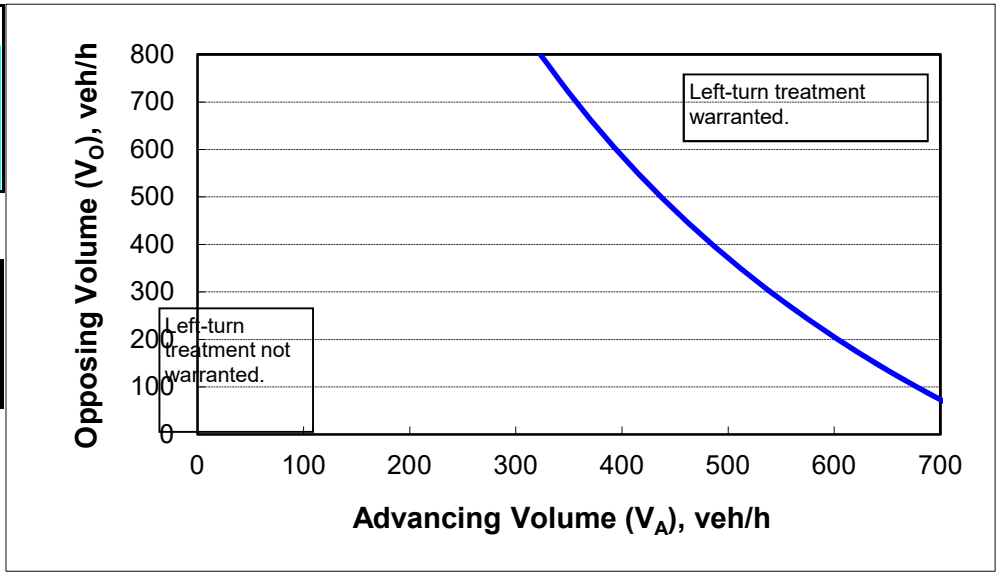
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	290
Opposing volume (V_O), veh/h:	963

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	276
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

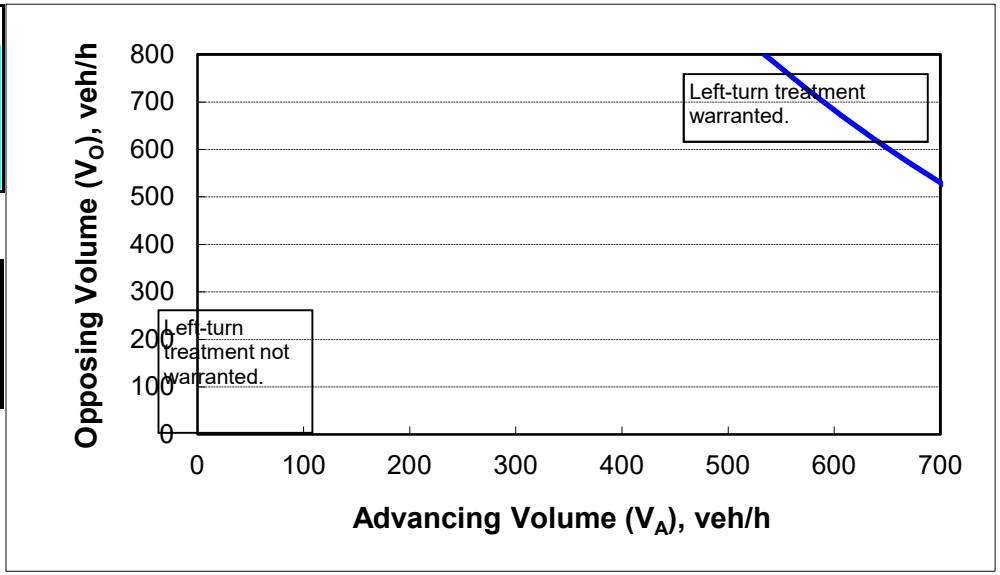
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	872
Opposing volume (V_O), veh/h:	1084

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	406
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	990
Percentage of right-turns on minor road, %:	8%
Minor-road volume (one direction), veh/h:	50

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	147
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

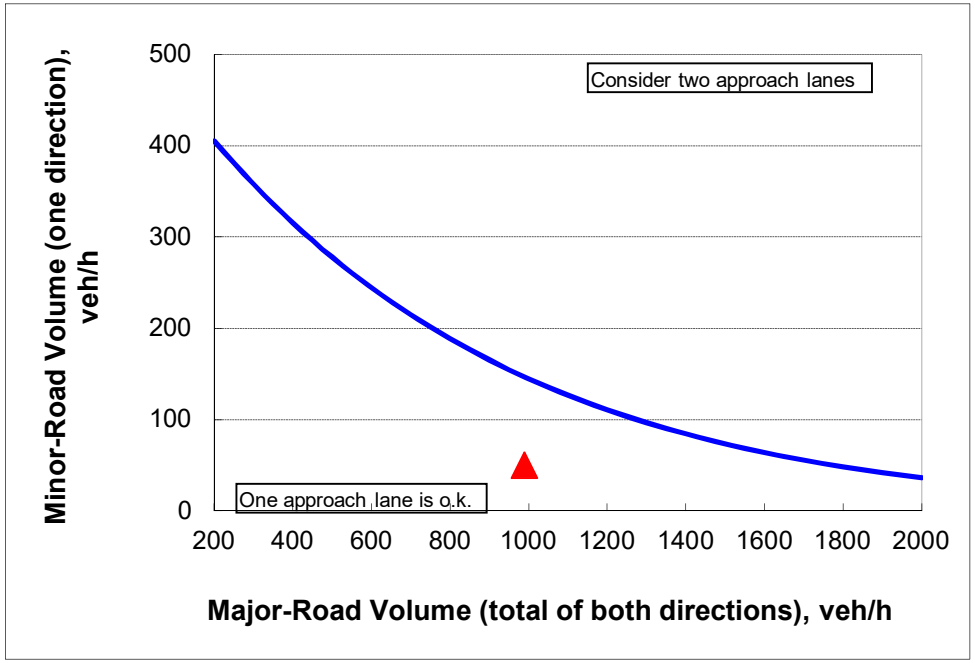


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1460
Percentage of right-turns on minor road, %:	9%
Minor-road volume (one direction), veh/h:	66

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	78
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

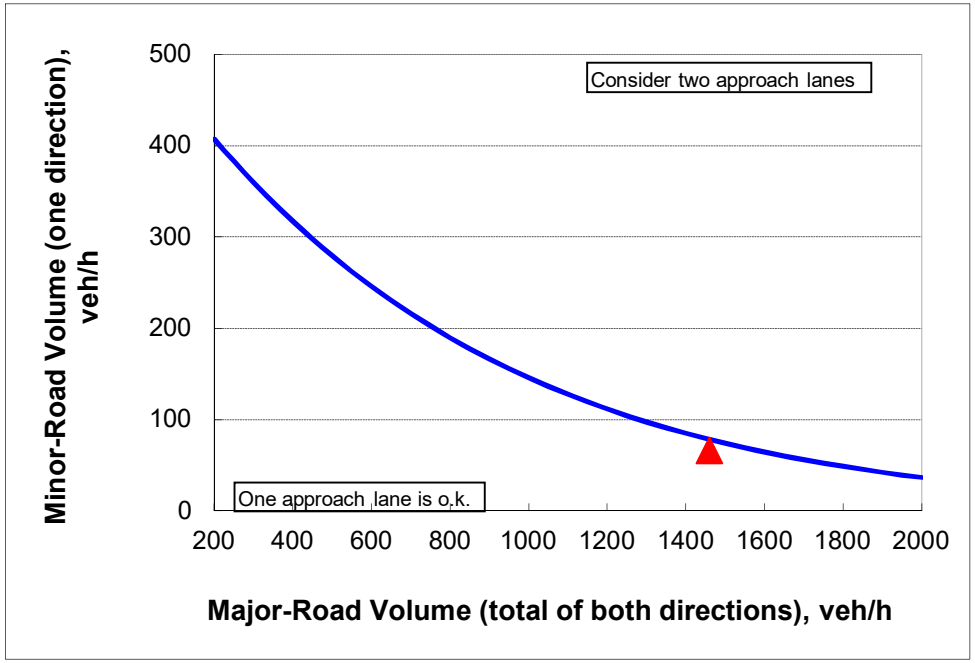


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	990
Percentage of right-turns on minor road, %:	63%
Minor-road volume (one direction), veh/h:	446

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	237
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

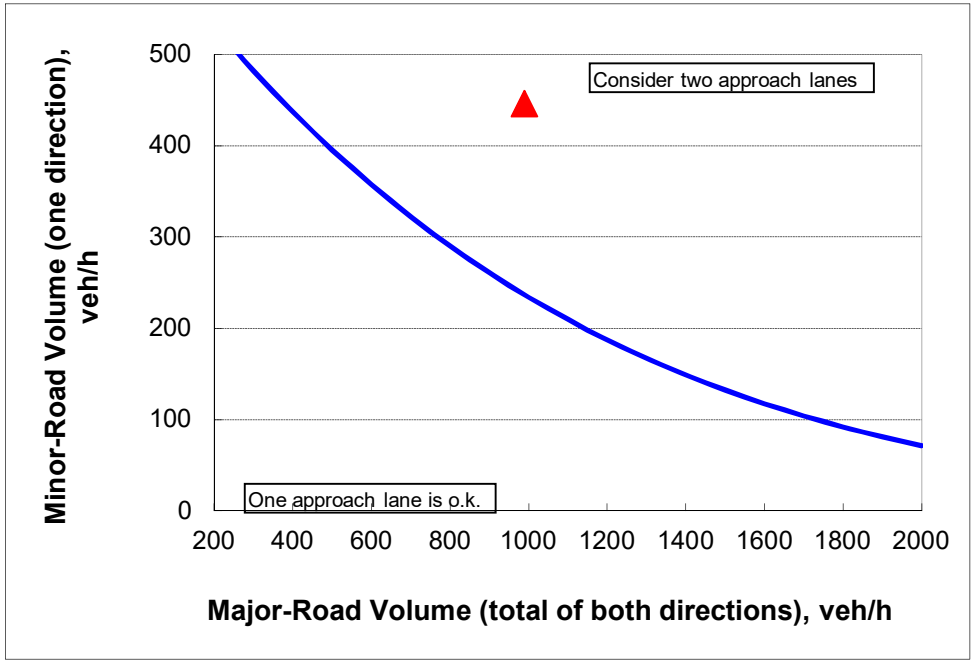


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1460
Percentage of right-turns on minor road, %:	58%
Minor-road volume (one direction), veh/h:	449

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	130
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

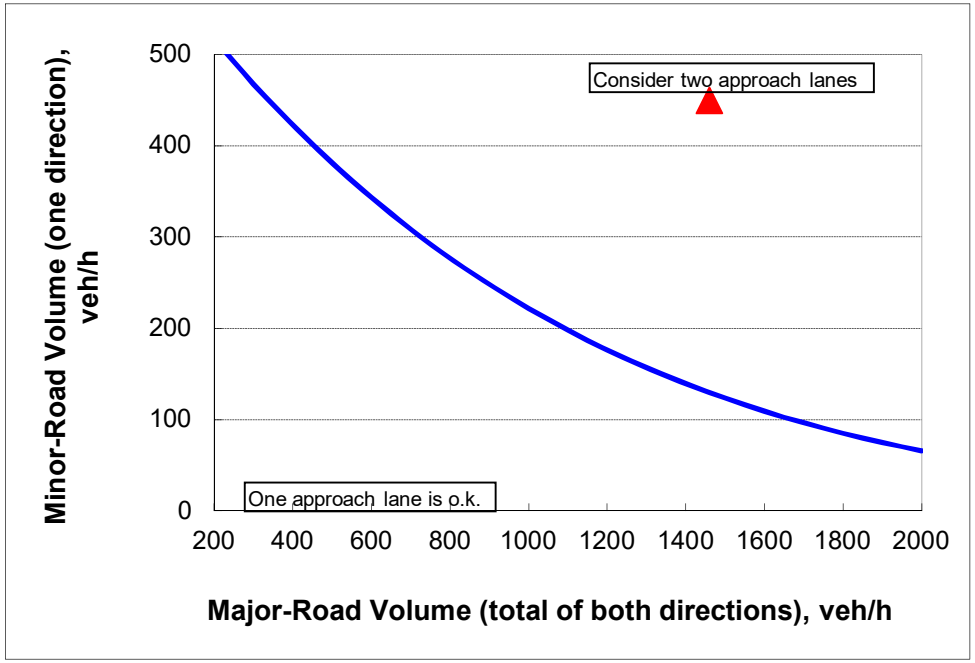


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1253
Percentage of right-turns on minor road, %:	8%
Minor-road volume (one direction), veh/h:	107

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	103
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

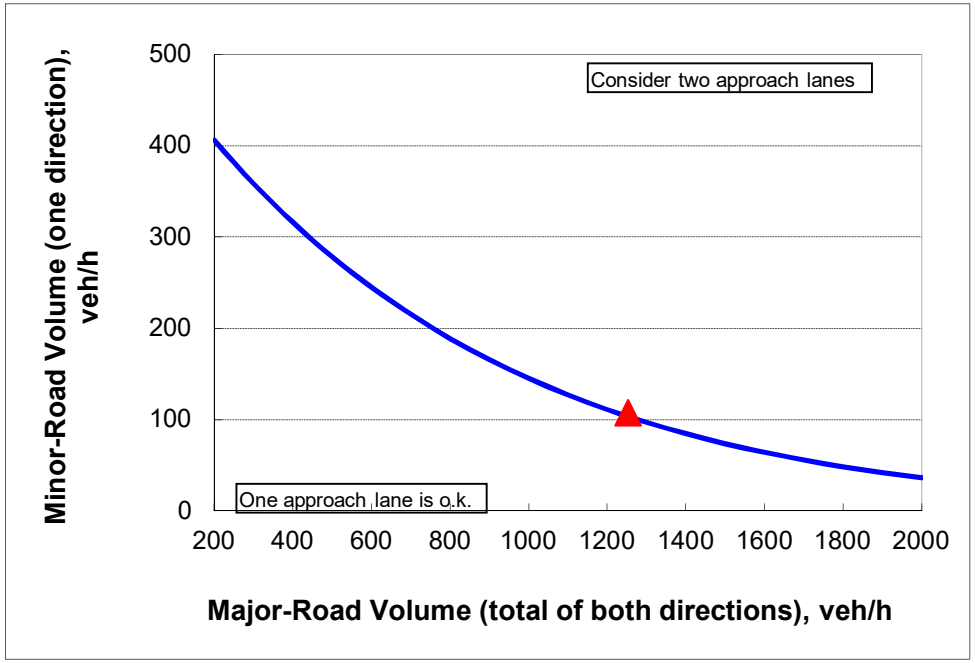


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1956
Percentage of right-turns on minor road, %:	9%
Minor-road volume (one direction), veh/h:	271

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	39
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

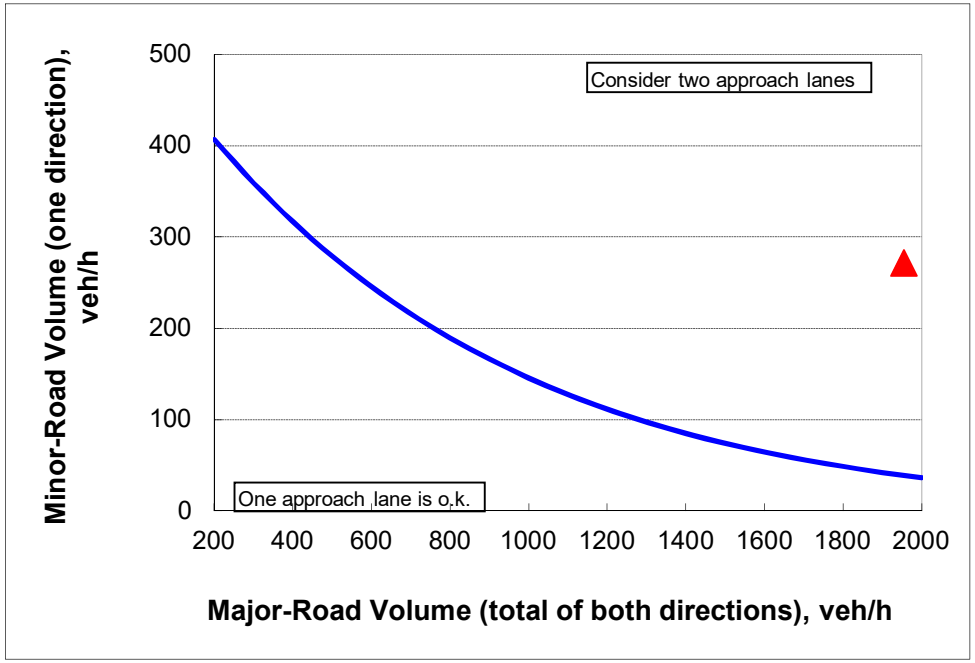


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	752
Right-turn volume, veh/h:	45

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	47
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

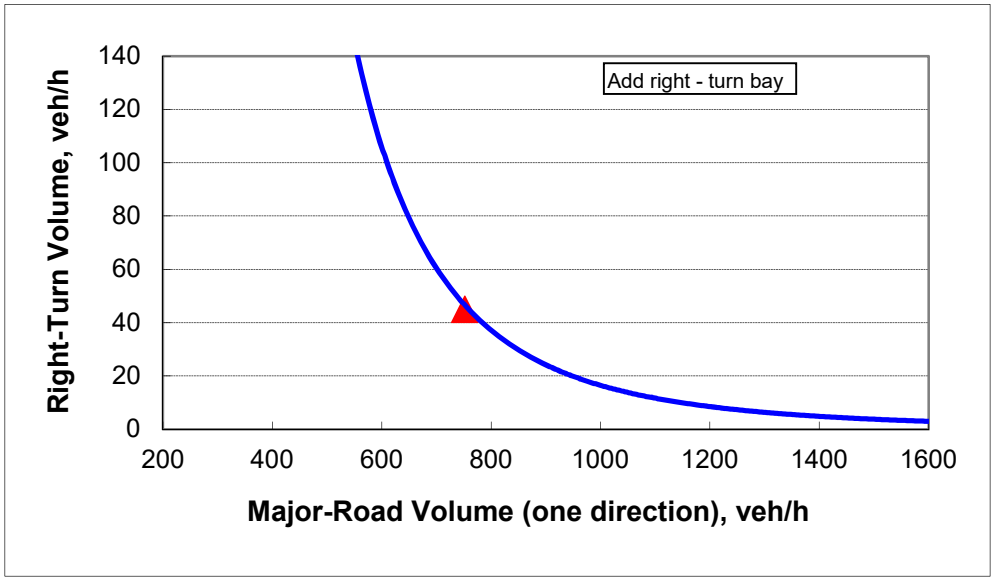


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	238
Right-turn volume, veh/h:	56

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	3056
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

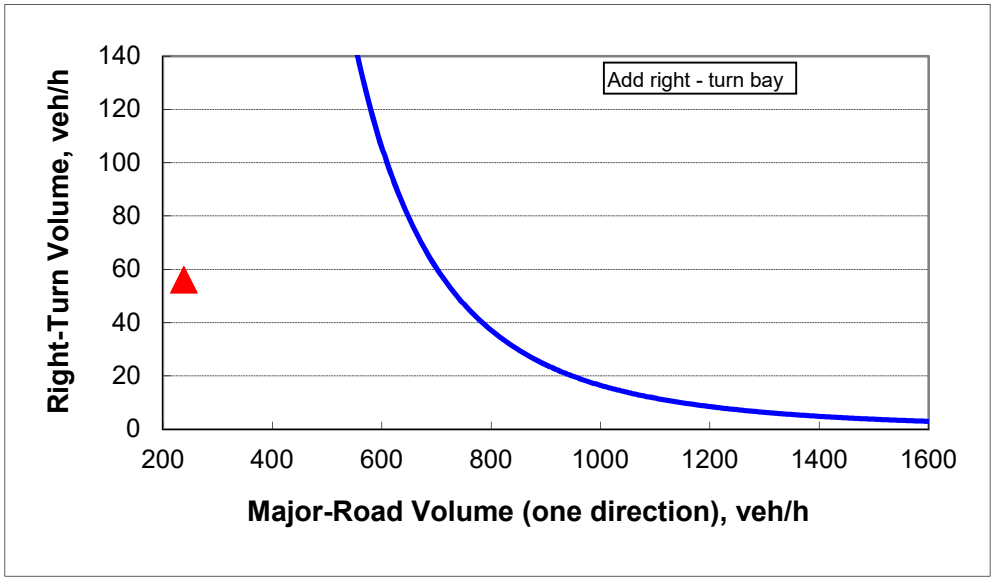


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	852
Right-turn volume, veh/h:	56

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	30
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

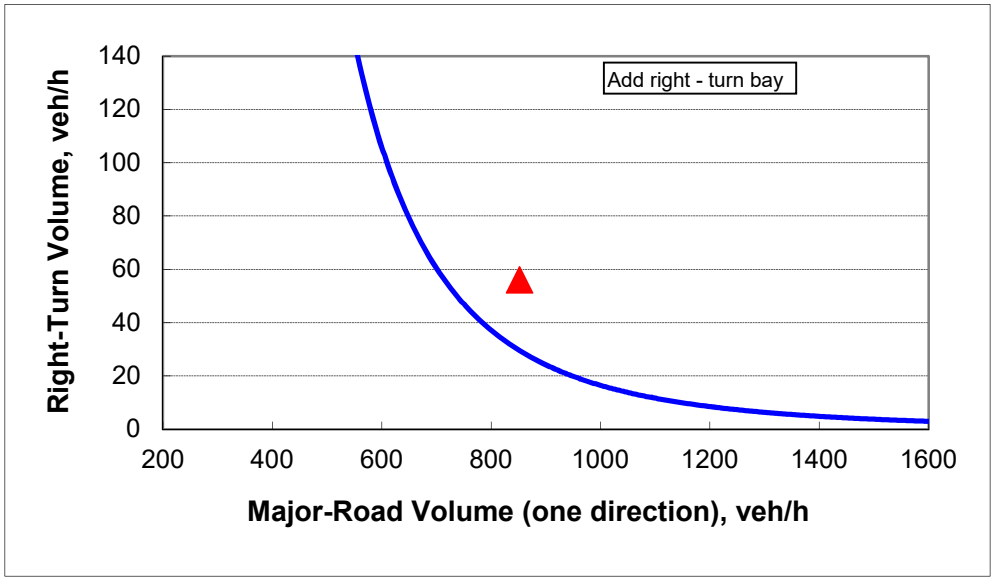


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	608
Right-turn volume, veh/h:	212

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	101
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

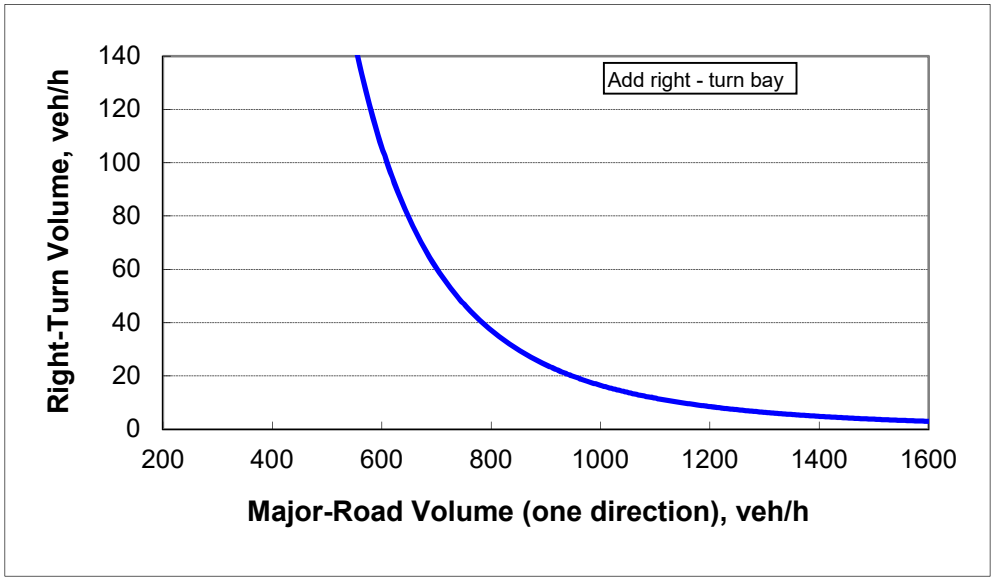


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

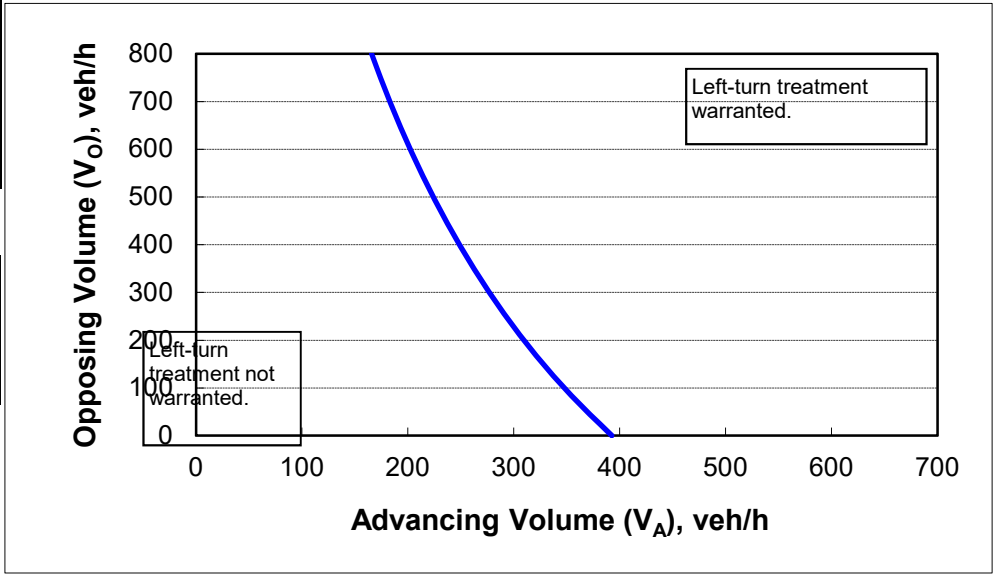
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	22%
Advancing volume (V_A), veh/h:	742
Opposing volume (V_O), veh/h:	905

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	150
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

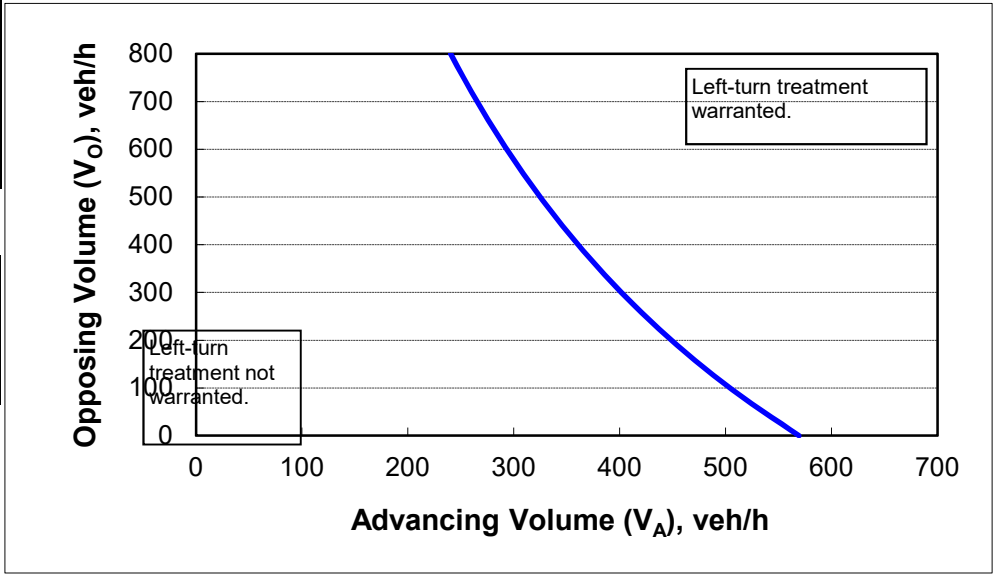
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	9%
Advancing volume (V_A), veh/h:	1167
Opposing volume (V_O), veh/h:	955

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	207
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1647
Percentage of right-turns on minor road, %:	44%
Minor-road volume (one direction), veh/h:	181

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	86
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

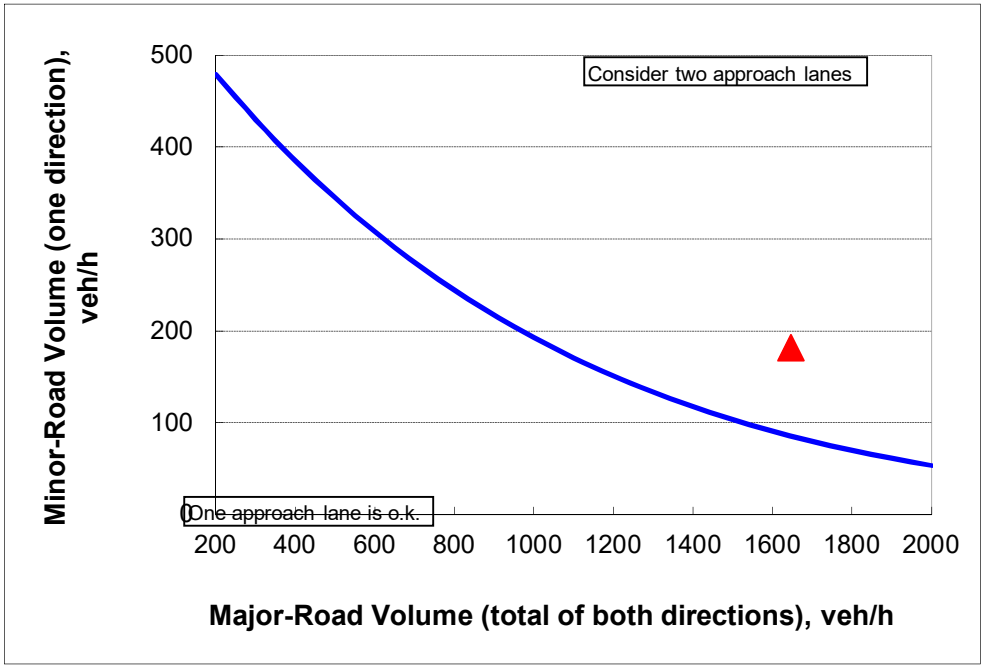


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	2122
Percentage of right-turns on minor road, %:	39%
Minor-road volume (one direction), veh/h:	427

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	43
Guidance for determining minor-road approach geometry:	
Consider TWO approach lanes	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

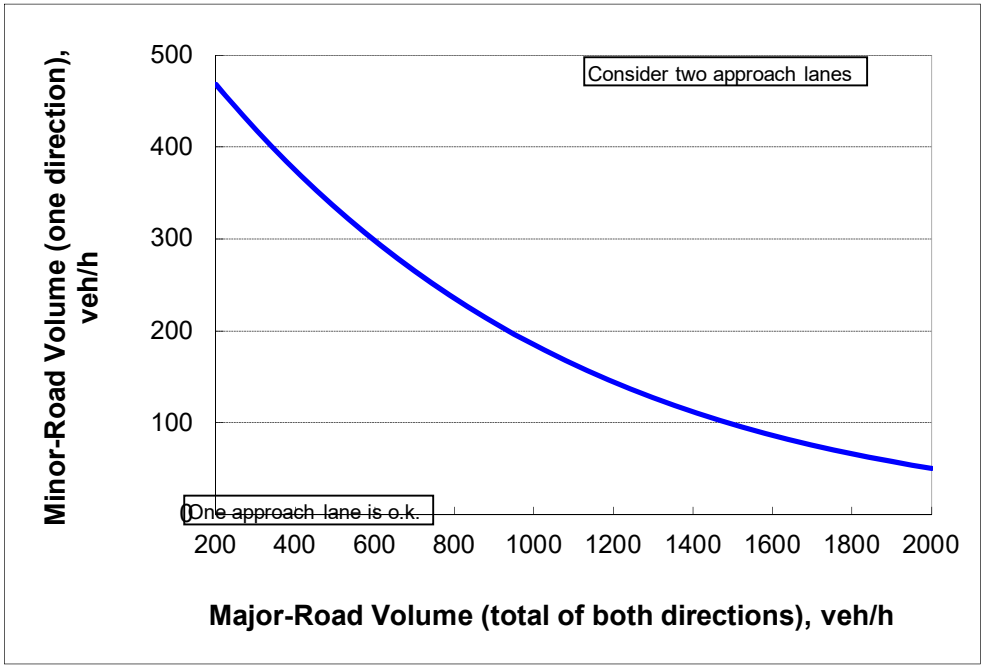


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	905
Right-turn volume, veh/h:	248

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	15
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

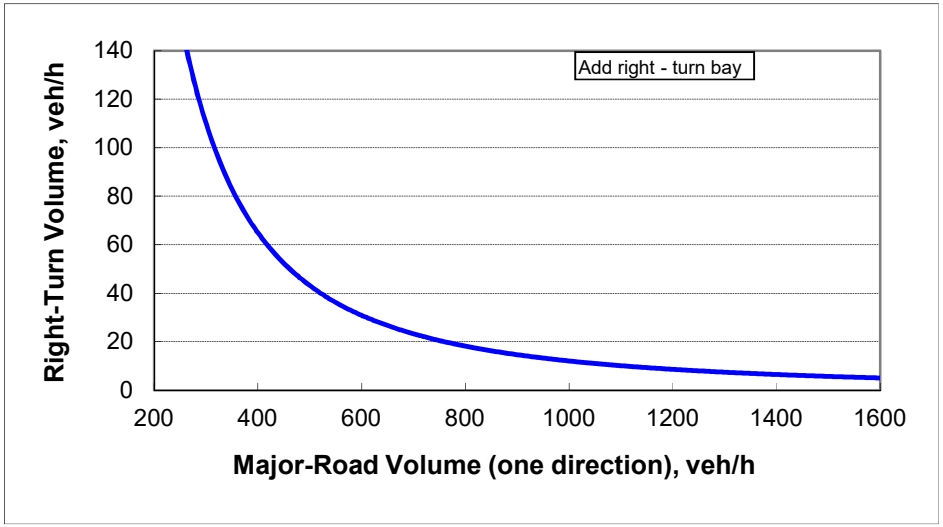


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	955
Right-turn volume, veh/h:	140

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	13
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

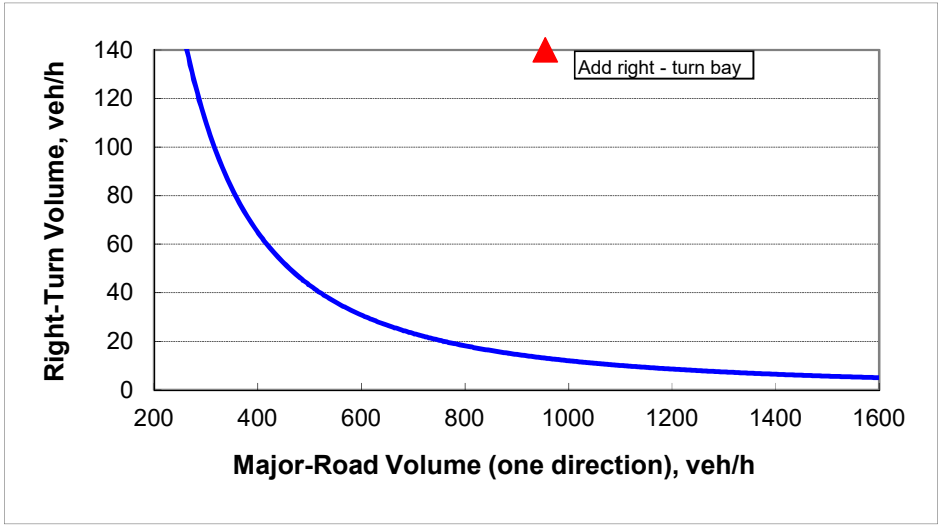


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

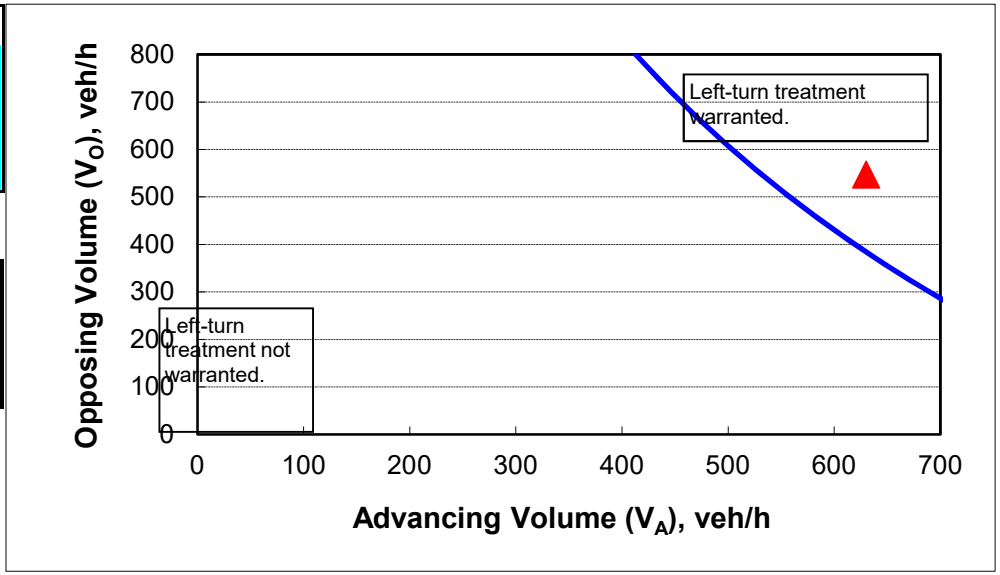
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	630
Opposing volume (V_O), veh/h:	547

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	532
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

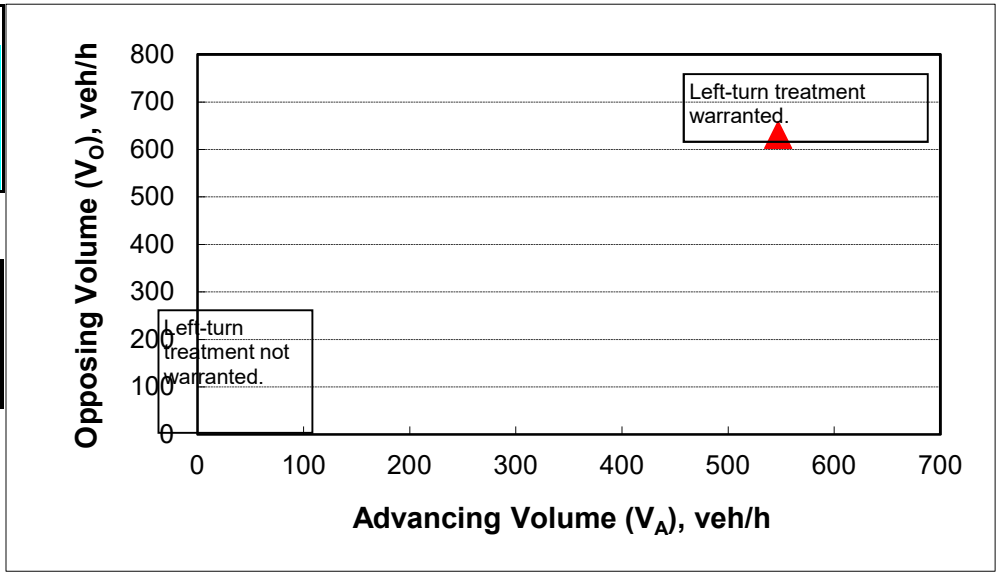
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	547
Opposing volume (V_O), veh/h:	630

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1349
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

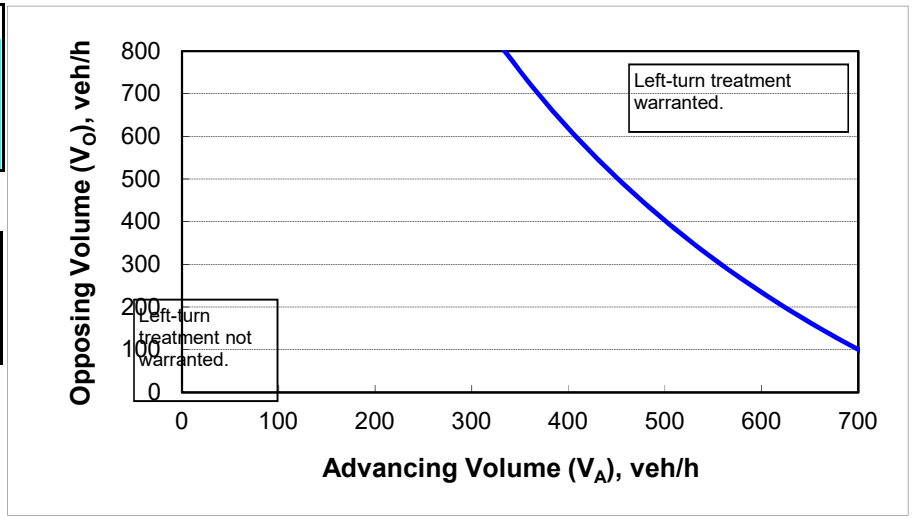
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	789
Opposing volume (V_O), veh/h:	965

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	284
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane , s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

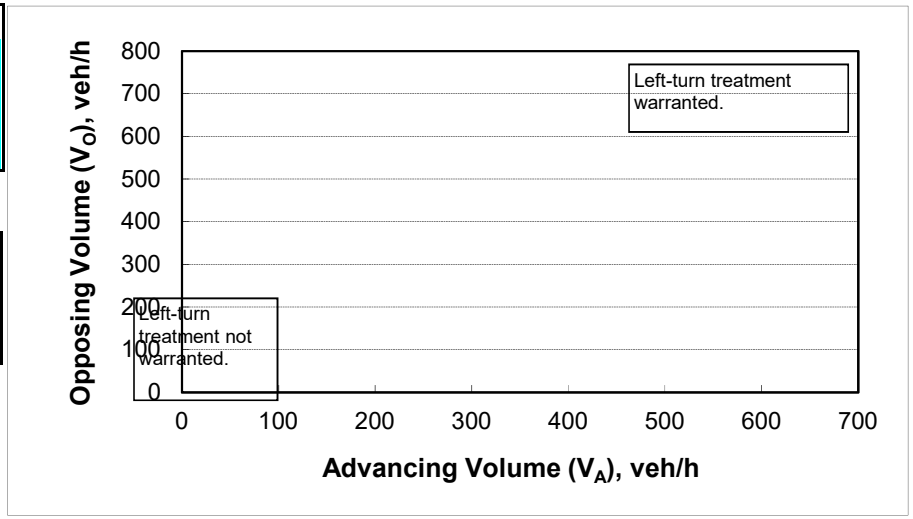
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	965
Opposing volume (V_O), veh/h:	789

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1249
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane , s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

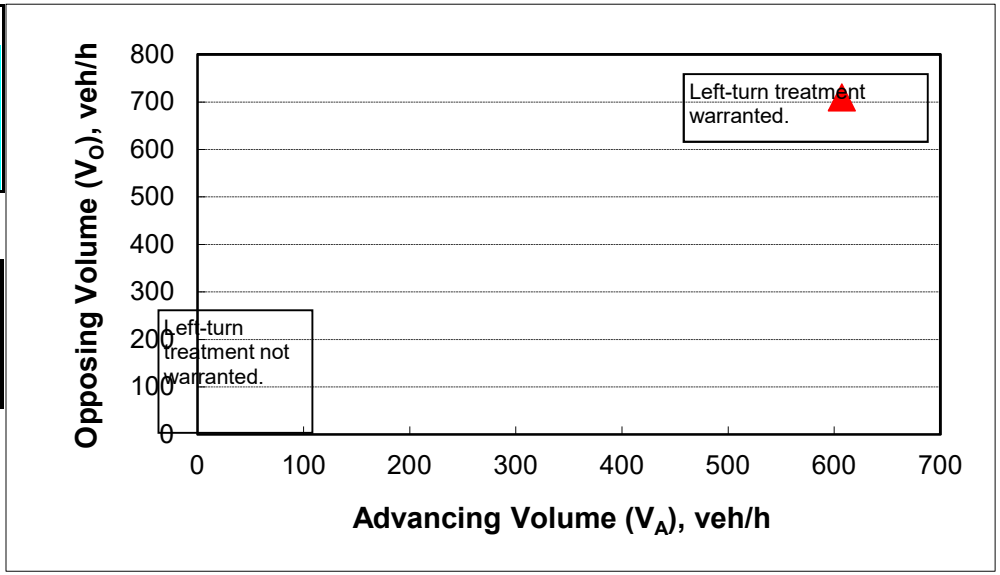
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	607
Opposing volume (V_O), veh/h:	709

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1313
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

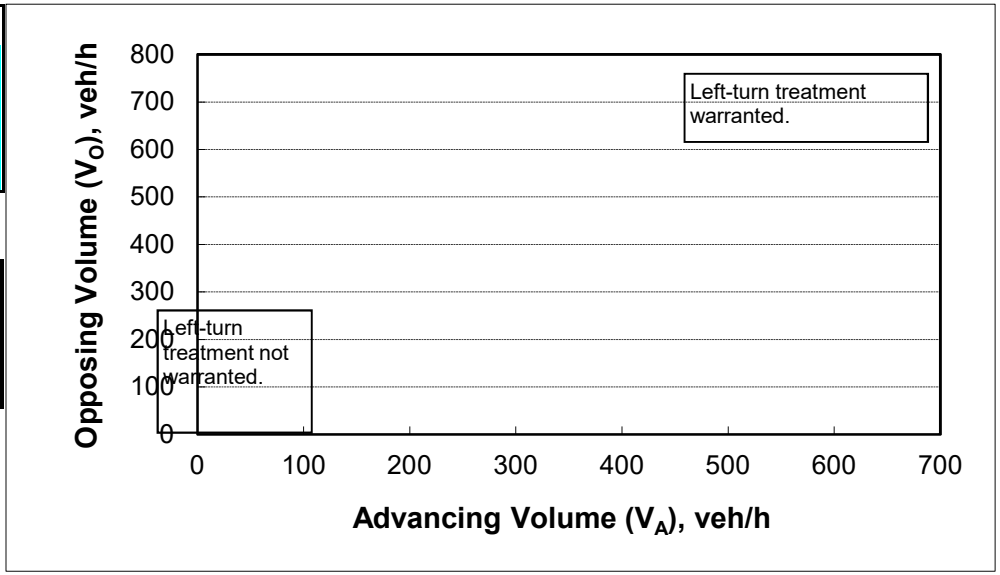
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	45
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	1062
Opposing volume (V_O), veh/h:	873

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1206
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

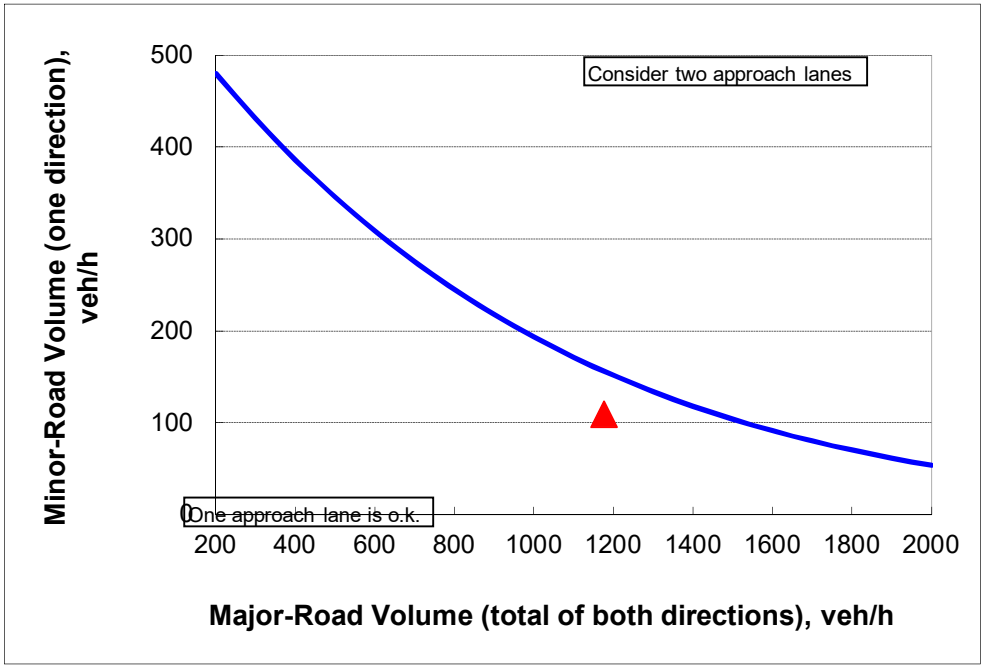
Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1177
Percentage of right-turns on minor road, %:	44%
Minor-road volume (one direction), veh/h:	109

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	156
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	



CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

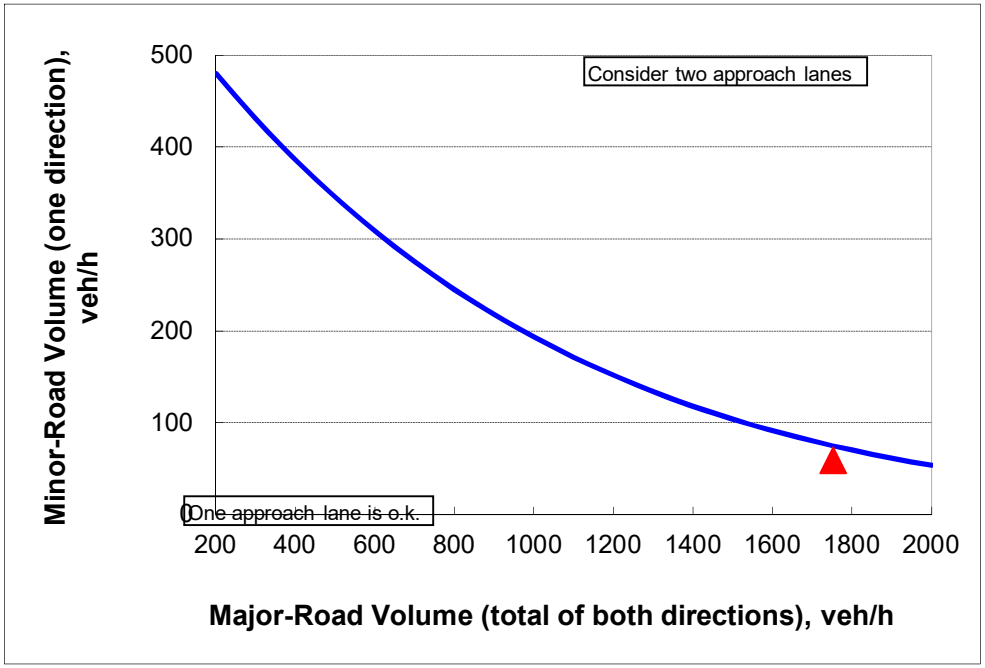
Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1754
Percentage of right-turns on minor road, %:	44%
Minor-road volume (one direction), veh/h:	59

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	75
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	



CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

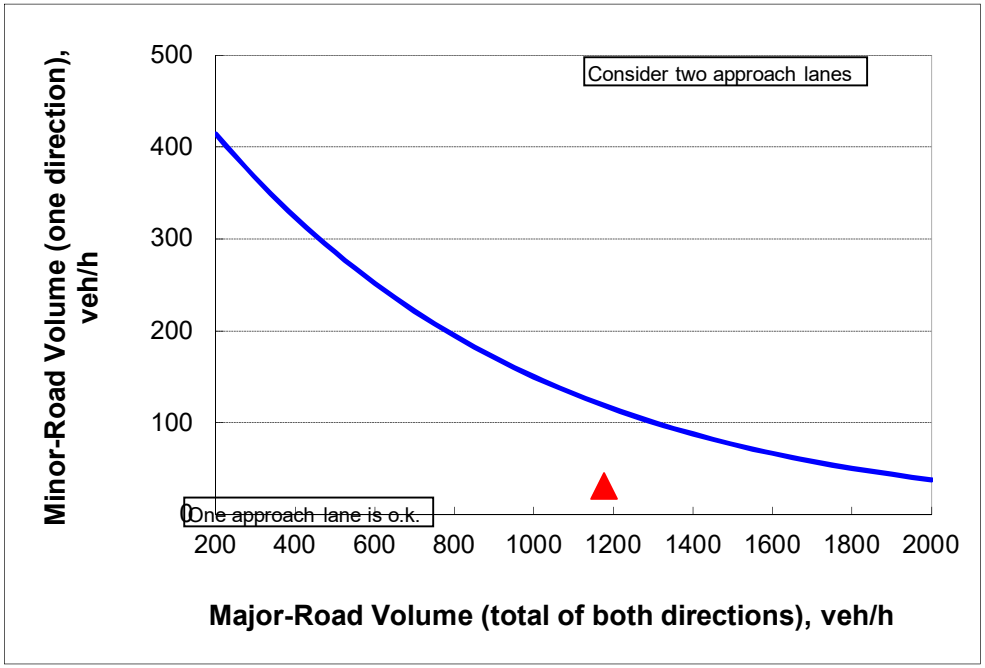
Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1177
Percentage of right-turns on minor road, %:	13%
Minor-road volume (one direction), veh/h:	31

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	119
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	



CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

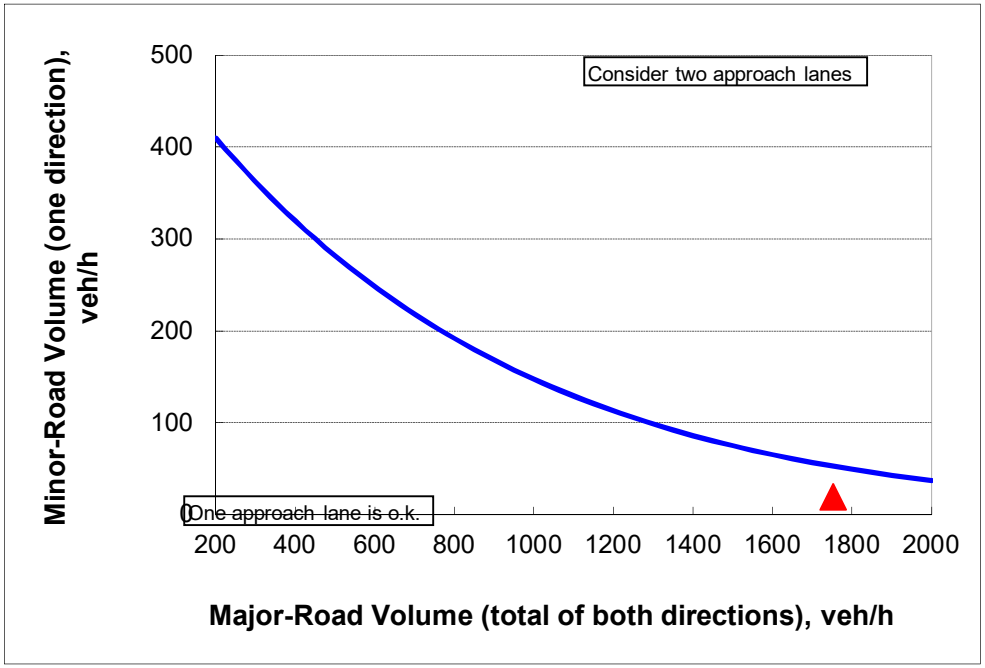
Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1754
Percentage of right-turns on minor road, %:	11%
Minor-road volume (one direction), veh/h:	19

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	53
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	



CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity, veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1316
Percentage of right-turns on minor road, %:	44%
Minor-road volume (one direction), veh/h:	109

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	131
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

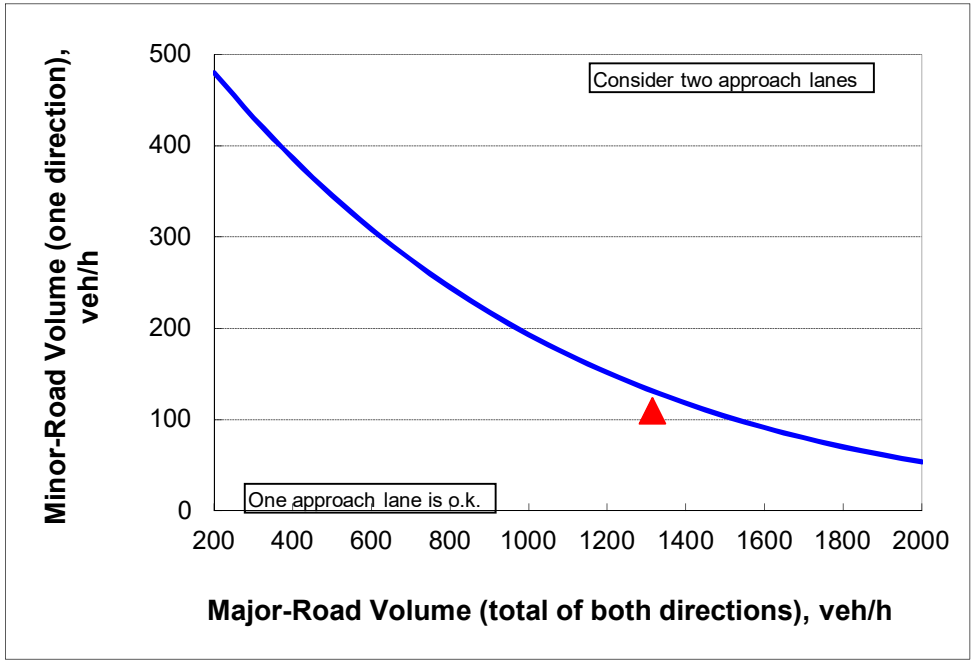


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1935
Percentage of right-turns on minor road, %:	44%
Minor-road volume (one direction), veh/h:	48

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	58
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

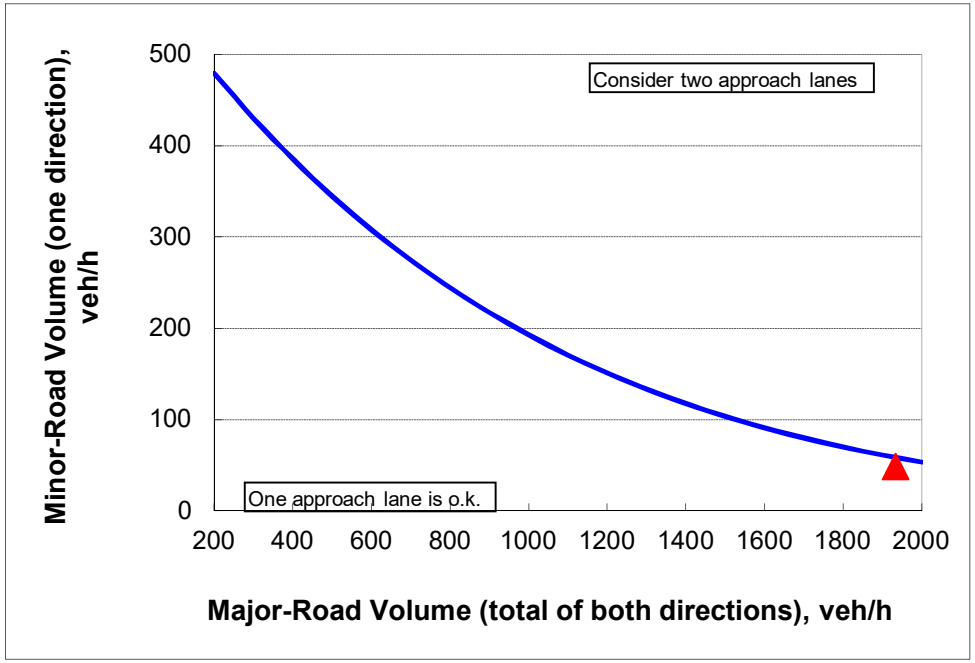


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1316
Percentage of right-turns on minor road, %:	10%
Minor-road volume (one direction), veh/h:	41

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	96
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

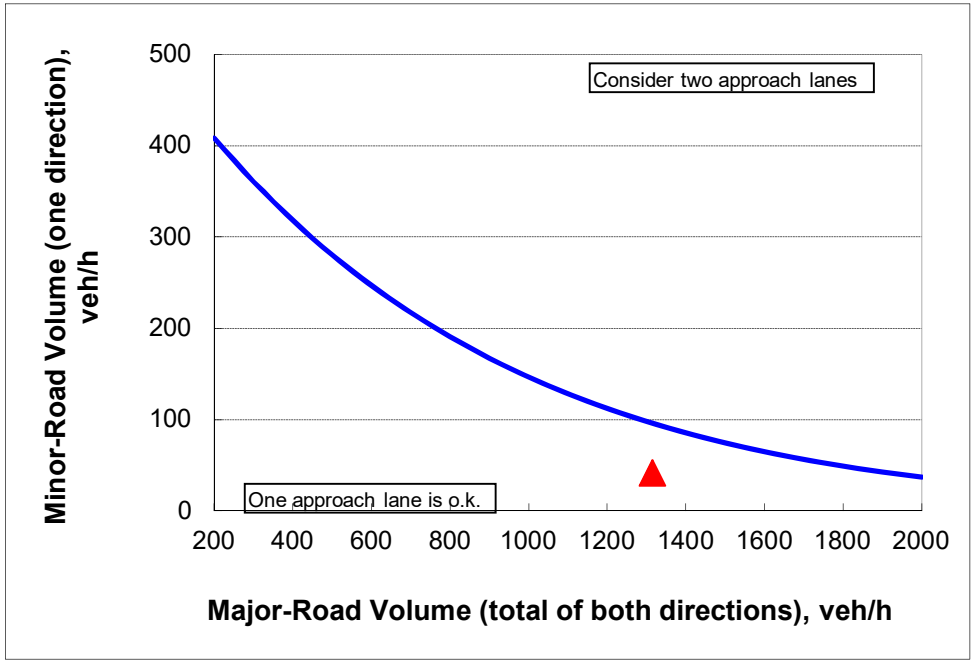


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

Variable	Value
Major-road volume (total of both directions), veh/h:	1935
Percentage of right-turns on minor road, %:	7%
Minor-road volume (one direction), veh/h:	27

OUTPUT

Variable	Value
Limiting minor-road volume (one direction), veh/h:	40
Guidance for determining minor-road approach geometry:	
ONE approach lane is o.k.	

CALIBRATION CONSTANTS

Minor Road	Critical gap, s:	Follow-up gap, s:
Right-turn capacity, veh/h:	6.2	3.3
Left-turn and through capacity veh/h:	6.5	4.0

* according to Table 17 - 5 of the HCM

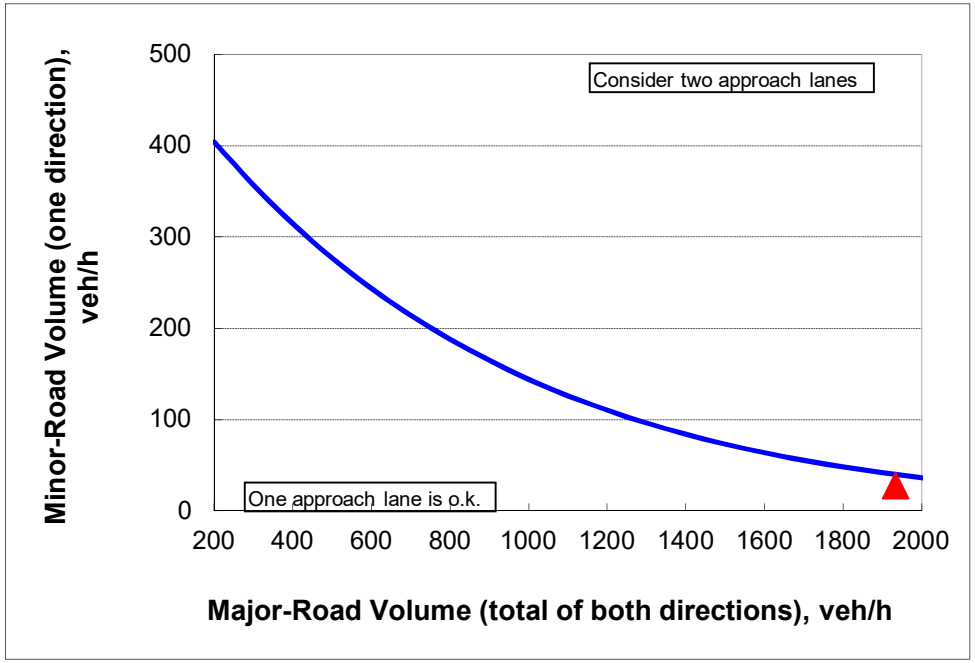


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	630
Right-turn volume, veh/h:	10

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	28
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

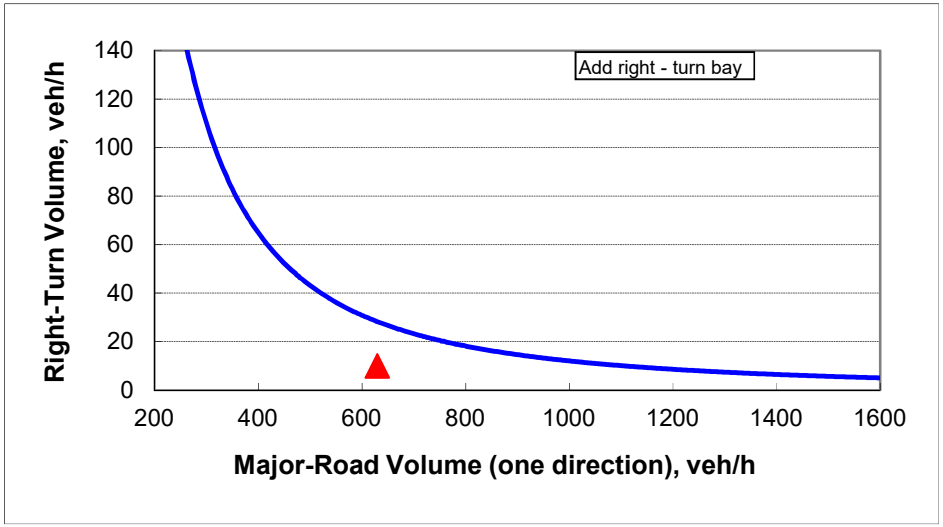


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	547
Right-turn volume, veh/h:	23

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	37
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

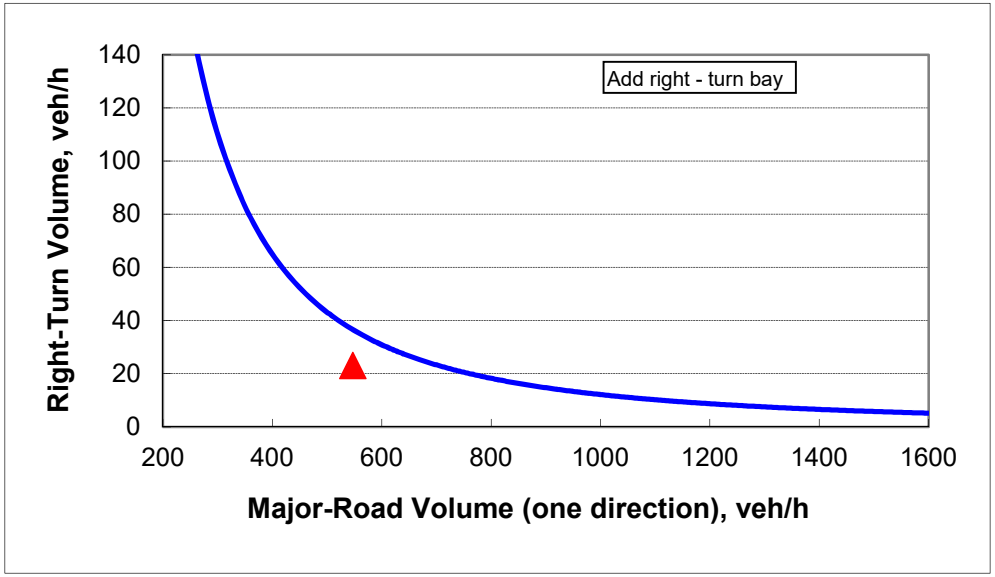


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	789
Right-turn volume, veh/h:	26

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	19
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

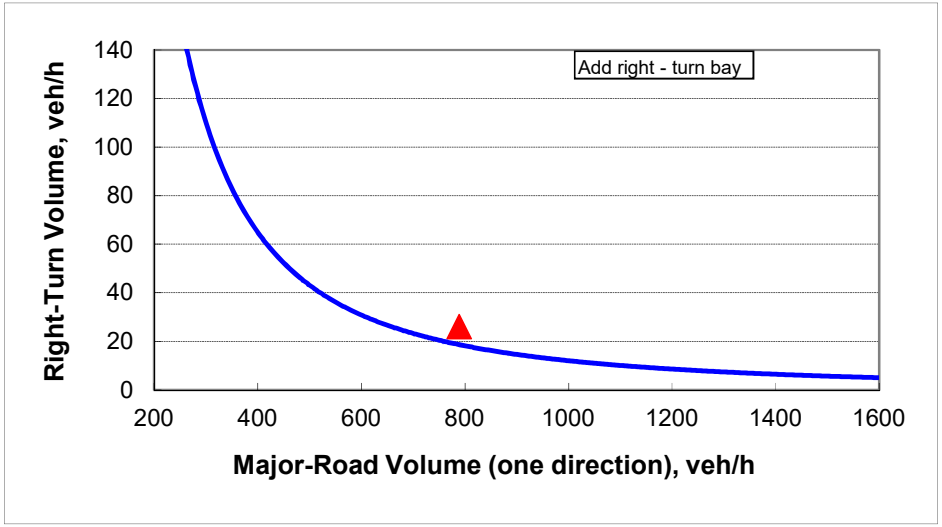


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

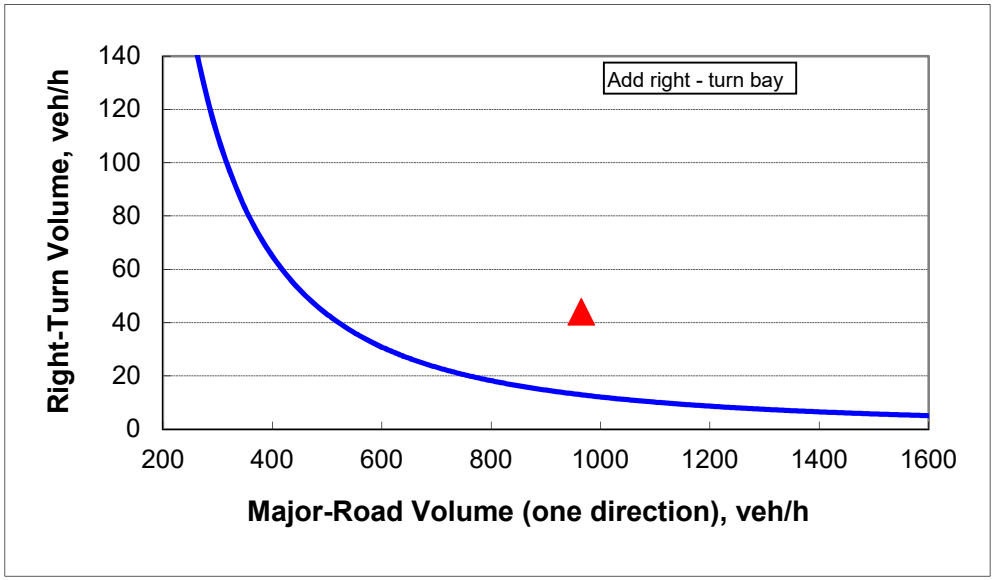
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	965
Right-turn volume, veh/h:	44

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	13
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	



APPENDIX G: Traffic Signal Warrant Analysis

Reeves Creek (Stockbridge) DRI #TBD
Davidson Pkwy at proposed Reeves Creek Pkwy/commercial dwy
With I-75 NB Interchange

Warrant 1 - Eight-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

	Major Road	Minor Road
Name	proposed Reeves Creek Pkwy	Davidson Pkwy/commercial
Number of Lanes by Approach	2	1

% of Volume	100%	**Data Year**	2019
Right Turn Reduction?	Yes	**Future Year**	2029
15 Min Interval Start	0	**Growth Rate**	2.00%
Mainline Left as Minor?	No		

Time Of Day			proposed Reeves Creek Pkwy Major Road Volume (vph) Both Approaches	Davidson Pkwy/commercial Minor Road Volume (vph) Highest Approach	Warrant 1, Condition A		Warrant 1, Condition B		Warrant 1, Combination A&B			
									Condition A		Condition B	
					Major Road Condition Met? *> 600 vph*	Minor Road Condition Met? *> 150 vph*	Major Road Condition Met? *> 900 vph*	Minor Road Condition Met? *> 75 vph*	Major Road Condition Met? *> 480 vph*	Minor Road Condition Met? *> 120 vph*	Major Road Condition Met? *> 720 vph*	Minor Road Condition Met? *> 60 vph*
12:00 AM	to	1:00 AM	0	0	No	No	No	No	No	No	No	No
1:00 AM	to	2:00 AM	0	0	No	No	No	No	No	No	No	No
2:00 AM	to	3:00 AM	0	0	No	No	No	No	No	No	No	No
3:00 AM	to	4:00 AM	0	0	No	No	No	No	No	No	No	No
4:00 AM	to	5:00 AM	0	0	No	No	No	No	No	No	No	No
5:00 AM	to	6:00 AM	0	0	No	No	No	No	No	No	No	No
6:00 AM	to	7:00 AM	500	108	No	No	No	Yes	Yes	No	No	Yes
7:00 AM	to	8:00 AM	762	163	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
8:00 AM	to	9:00 AM	833	176	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9:00 AM	to	10:00 AM	716	147	Yes	No	No	Yes	Yes	Yes	No	Yes
10:00 AM	to	11:00 AM	721	146	Yes	No	No	Yes	Yes	Yes	Yes	Yes
11:00 AM	to	12:00 PM	907	176	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12:00 PM	to	1:00 PM	876	182	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
1:00 PM	to	2:00 PM	1030	195	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2:00 PM	to	3:00 PM	1069	190	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3:00 PM	to	4:00 PM	1126	183	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4:00 PM	to	5:00 PM	1324	193	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5:00 PM	to	6:00 PM	1552	226	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6:00 PM	to	7:00 PM	1184	191	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7:00 PM	to	8:00 PM	0	0	No	No	No	No	No	No	No	No
8:00 PM	to	9:00 PM	0	0	No	No	No	No	No	No	No	No
9:00 PM	to	10:00 PM	0	0	No	No	No	No	No	No	No	No
10:00 PM	to	11:00 PM	0	0	No	No	No	No	No	No	No	No
11:00 PM	to	12:00 AM	0	0	No	No	No	No	No	No	No	No
			Total Hours Condition is Met		10		7		11			
			Meets Warrant?		**Yes - Warrant is Met**		**No - Warrant is Not Met**		**Yes - Warrant is Met**			

Reeves Creek (Stockbridge) DRI #TBD
Davidson Pkwy at proposed Reeves Creek Pkwy/commercial dwy
With I-75 NB Interchange

LOWE ENGINEERS

Warrant 2 - Four-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

	Major Road	Minor Road
Name	proposed Reeves Creek Pkwy	Davidson Pkwy/commercial
Number of Lanes by Approach	2	1

% of Volume	100%	**Data Year**	2019
Right Turn Reduction?	Yes	**Future Year**	2029
15 Min Interval Start	0	**Growth Rate**	2.00%
Mainline Left as Minor?	No		

Time Of Day			proposed Reeves Creek Pkwy Major Road Volume (vph) Both Approaches	Davidson Pkwy/commercial Minor Road Volume (vph) Highest Approach	Warrant 2 Four-Hour Vehicular Volume Condtion Met?
12:00 AM	to	1:00 AM	0	0	No
1:00 AM	to	2:00 AM	0	0	No
2:00 AM	to	3:00 AM	0	0	No
3:00 AM	to	4:00 AM	0	0	No
4:00 AM	to	5:00 AM	0	0	No
5:00 AM	to	6:00 AM	0	0	No
6:00 AM	to	7:00 AM	500	108	No
7:00 AM	to	8:00 AM	762	163	No
8:00 AM	to	9:00 AM	833	176	No
9:00 AM	to	10:00 AM	716	147	No
10:00 AM	to	11:00 AM	721	146	No
11:00 AM	to	12:00 PM	907	176	Yes
12:00 PM	to	1:00 PM	876	182	Yes
1:00 PM	to	2:00 PM	1030	195	Yes
2:00 PM	to	3:00 PM	1069	190	Yes
3:00 PM	to	4:00 PM	1126	183	Yes
4:00 PM	to	5:00 PM	1324	193	Yes
5:00 PM	to	6:00 PM	1552	226	Yes
6:00 PM	to	7:00 PM	1184	191	Yes
7:00 PM	to	8:00 PM	0	0	No
8:00 PM	to	9:00 PM	0	0	No
9:00 PM	to	10:00 PM	0	0	No
10:00 PM	to	11:00 PM	0	0	No
11:00 PM	to	12:00 AM	0	0	No
				Total Hours Condition is Met	8
				Meets Warrant?	**Yes - Warrant is Met**

Reeves Creek (Stockbridge) DRI #TBD
Davidson Pkwy at proposed Reeves Creek Pkwy/commercial dwy
With I-75 NB Interchange

LOWE ENGINEERS

Warrant 1 - Peak-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

	Major Road	Minor Road
Name	proposed Reeves Creek Pkwy	Davidson Pkwy/commercial
Number of Lanes by Approach	2	1

% of Volume	100%	**Data Year**	2019
Right Turn Reduction?	Yes	**Future Year**	2029
15 Min Interval Start	0	**Growth Rate**	2.00%
Mainline Left as Minor?	No		

Time Of Day			proposed Reeves Creek Pkwy Major Road Volume (vph) Both Approaches	Davidson Pkwy/commercial Minor Road Volume (vph) Highest Approach	Warrant 3 Peak-Hour Vehicular Volume Condtion Met?
12:00 AM	to	1:00 AM	0	0	No
1:00 AM	to	2:00 AM	0	0	No
2:00 AM	to	3:00 AM	0	0	No
3:00 AM	to	4:00 AM	0	0	No
4:00 AM	to	5:00 AM	0	0	No
5:00 AM	to	6:00 AM	0	0	No
6:00 AM	to	7:00 AM	500	108	No
7:00 AM	to	8:00 AM	762	163	No
8:00 AM	to	9:00 AM	833	176	No
9:00 AM	to	10:00 AM	716	147	No
10:00 AM	to	11:00 AM	721	146	No
11:00 AM	to	12:00 PM	907	176	No
12:00 PM	to	1:00 PM	876	182	No
1:00 PM	to	2:00 PM	1030	195	No
2:00 PM	to	3:00 PM	1069	190	No
3:00 PM	to	4:00 PM	1126	183	No
4:00 PM	to	5:00 PM	1324	193	Yes
5:00 PM	to	6:00 PM	1552	226	Yes
6:00 PM	to	7:00 PM	1184	191	No
7:00 PM	to	8:00 PM	0	0	No
8:00 PM	to	9:00 PM	0	0	No
9:00 PM	to	10:00 PM	0	0	No
10:00 PM	to	11:00 PM	0	0	No
11:00 PM	to	12:00 AM	0	0	No
				Total Hours Condition is Met	2
				Meets Warrant?	**Yes - Warrant is Met**

Reeves Creek (Stockbridge) DRI #TBD
Walt Stephens Rd at proposed Reeves Creek Pkwy
Without I-75 NB Interchange

Warrant 1 - Eight-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

	Major Road	Minor Road
Name	Walt Stephens Rd	*proposed* Reeves Creek Pkwy
Number of Lanes by Approach	1	1

% of Volume	100%	**Data Year**	2019
Right Turn Reduction?	Yes	**Future Year**	2029
15 Min Interval Start	0	**Growth Rate**	2.00%
Mainline Left as Minor?	No		

Time Of Day	Walt Stephens Rd Major Road Volume (vph) Both Approaches	*proposed* Reeves Creek Minor Road Volume (vph) Highest Approach	Warrant 1, Condition A: Major Road Condition Met? > 500 vph	Warrant 1, Condition A: Minor Road Condition Met? > 150 vph	Warrant 1, Condition B: Major Road Condition Met? > 750 vph	Warrant 1, Condition B: Minor Road Condition Met? > 75 vph	Warrant 1, Combination A&B: Condition A: Major Road Condition Met? > 400 vph	Warrant 1, Combination A&B: Condition A: Minor Road Condition Met? > 120 vph	Warrant 1, Combination A&B: Condition B: Major Road Condition Met? > 600 vph	Warrant 1, Combination A&B: Condition B: Minor Road Condition Met? > 60 vph
12:00 AM to 1:00 AM	146	8	No	No	No	No	No	No	No	No
1:00 AM to 2:00 AM	103	5	No	No	No	No	No	No	No	No
2:00 AM to 3:00 AM	55	2	No	No	No	No	No	No	No	No
3:00 AM to 4:00 AM	70	3	No	No	No	No	No	No	No	No
4:00 AM to 5:00 AM	104	4	No	No	No	No	No	No	No	No
5:00 AM to 6:00 AM	283	11	No	No	No	No	No	No	No	No
6:00 AM to 7:00 AM	648	24	Yes	No	No	No	Yes	No	Yes	No
7:00 AM to 8:00 AM	1597	71	Yes	No	Yes	No	Yes	No	Yes	Yes
8:00 AM to 9:00 AM	1166	52	Yes	No	Yes	No	Yes	No	Yes	No
9:00 AM to 10:00 AM	989	61	Yes	No	Yes	No	Yes	No	Yes	Yes
10:00 AM to 11:00 AM	917	75	Yes	No	Yes	No	Yes	No	Yes	Yes
11:00 AM to 12:00 PM	971	97	Yes	No	Yes	Yes	Yes	No	Yes	Yes
12:00 PM to 1:00 PM	1143	114	Yes	No	Yes	Yes	Yes	No	Yes	Yes
1:00 PM to 2:00 PM	1210	110	Yes	No	Yes	Yes	Yes	No	Yes	Yes
2:00 PM to 3:00 PM	1435	116	Yes	No	Yes	Yes	Yes	No	Yes	Yes
3:00 PM to 4:00 PM	1479	114	Yes	No	Yes	Yes	Yes	No	Yes	Yes
4:00 PM to 5:00 PM	1676	123	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
5:00 PM to 6:00 PM	1982	132	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
6:00 PM to 7:00 PM	1671	107	Yes	No	Yes	Yes	Yes	No	Yes	Yes
7:00 PM to 8:00 PM	1316	80	Yes	No	Yes	Yes	Yes	No	Yes	Yes
8:00 PM to 9:00 PM	855	51	Yes	No	Yes	No	Yes	No	Yes	No
9:00 PM to 10:00 PM	738	40	Yes	No	No	No	Yes	No	Yes	No
10:00 PM to 11:00 PM	431	21	No	No	No	No	Yes	No	No	No
11:00 PM to 12:00 AM	330	15	No	No	No	No	No	No	No	No
Total Hours Condition is Met			0		9		2			
Meets Warrant?			**No - Warrant is Not Met**		**Yes - Warrant is Met**		**No - Warrant is Not Met**			

Reeves Creek (Stockbridge) DRI #TBD
Walt Stephens Rd at proposed Reeves Creek Pkwy
Without I-75 NB Interchange

Warrant 2 - Four-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

	Major Road	Minor Road
Name	Walt Stephens Rd	*proposed* Reeves Creek Pkwy
Number of Lanes by Approach	1	1

% of Volume	100%	**Data Year**	2019
Right Turn Reduction?	Yes	**Future Year**	2029
15 Min Interval Start	0	**Growth Rate**	2.00%
Mainline Left as Minor?	No		

Time Of Day			Walt Stephens Rd Major Road Volume (vph) Both Approaches	*proposed* Reeves Creek Minor Road Volume (vph) Highest Approach	Warrant 2 Four-Hour Vehicular Volume Condtion Met?
12:00 AM	to	1:00 AM	146	8	No
1:00 AM	to	2:00 AM	103	5	No
2:00 AM	to	3:00 AM	55	2	No
3:00 AM	to	4:00 AM	70	3	No
4:00 AM	to	5:00 AM	104	4	No
5:00 AM	to	6:00 AM	283	11	No
6:00 AM	to	7:00 AM	648	24	No
7:00 AM	to	8:00 AM	1597	71	No
8:00 AM	to	9:00 AM	1166	52	No
9:00 AM	to	10:00 AM	989	61	No
10:00 AM	to	11:00 AM	917	75	No
11:00 AM	to	12:00 PM	971	97	No
12:00 PM	to	1:00 PM	1143	114	Yes
1:00 PM	to	2:00 PM	1210	110	Yes
2:00 PM	to	3:00 PM	1435	116	Yes
3:00 PM	to	4:00 PM	1479	114	Yes
4:00 PM	to	5:00 PM	1676	123	Yes
5:00 PM	to	6:00 PM	1982	132	Yes
6:00 PM	to	7:00 PM	1671	107	Yes
7:00 PM	to	8:00 PM	1316	80	No
8:00 PM	to	9:00 PM	855	51	No
9:00 PM	to	10:00 PM	738	40	No
10:00 PM	to	11:00 PM	431	21	No
11:00 PM	to	12:00 AM	330	15	No
				Total Hours Condition is Met	7
				Meets Warrant?	**Yes - Warrant is Met**

Reeves Creek (Stockbridge) DRI #TBD
Walt Stephens Rd at proposed Reeves Creek Pkwy
Without I-75 NB Interchange

LOWE ENGINEERS

Warrant 1 - Peak-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

	Major Road	Minor Road
Name	Walt Stephens Rd	*proposed* Reeves Creek Pkwy
Number of Lanes by Approach	2	1

% of Volume	100%	**Data Year**	2019
Right Turn Reduction?	Yes	**Future Year**	2029
15 Min Interval Start	0	**Growth Rate**	2.00%
Mainline Left as Minor?	No		

Time Of Day			Walt Stephens Rd Major Road Volume (vph) Both Approaches	*proposed* Reeves Creek Minor Road Volume (vph) Highest Approach	Warrant 3 Peak-Hour Vehicular Volume Condtion Met?
12:00 AM	to	1:00 AM	146	8	No
1:00 AM	to	2:00 AM	103	5	No
2:00 AM	to	3:00 AM	55	2	No
3:00 AM	to	4:00 AM	70	3	No
4:00 AM	to	5:00 AM	104	4	No
5:00 AM	to	6:00 AM	283	11	No
6:00 AM	to	7:00 AM	648	24	No
7:00 AM	to	8:00 AM	1597	71	No
8:00 AM	to	9:00 AM	1166	52	No
9:00 AM	to	10:00 AM	989	61	No
10:00 AM	to	11:00 AM	917	75	No
11:00 AM	to	12:00 PM	971	97	No
12:00 PM	to	1:00 PM	1143	114	No
1:00 PM	to	2:00 PM	1210	110	No
2:00 PM	to	3:00 PM	1435	116	No
3:00 PM	to	4:00 PM	1479	114	No
4:00 PM	to	5:00 PM	1676	123	Yes
5:00 PM	to	6:00 PM	1982	132	Yes
6:00 PM	to	7:00 PM	1671	107	No
7:00 PM	to	8:00 PM	1316	80	No
8:00 PM	to	9:00 PM	855	51	No
9:00 PM	to	10:00 PM	738	40	No
10:00 PM	to	11:00 PM	431	21	No
11:00 PM	to	12:00 AM	330	15	No
				Total Hours Condition is Met	2
				Meets Warrant?	**Yes - Warrant is Met**