Transportation Analysis

Braselton Highway and Spout Springs Road Multi-Use Development
Development of Regional Impact #3077
Gwinnett County, Georgia

May 8, 2020

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING

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study prepared for:

MFT, LLC

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Summary

This Transportation Analysis was prepared for the Braselton Spout Springs Development of Regional Impact (DRI) #3077, in compliance with the requirements of the Georgia Regional Transportation Authority and the Atlanta Regional Commission. The following is a summary of the findings of this study:

1. The project will consist of 524 residential units including 121 detached single family homes, 40 townhomes, and 363 multi-family units; seven (7) commercial outparcels including a 5,600 ft² restaurant, a 3,000 ft² restaurant with drive-through, another 3,000 ft² restaurant with drive-through, 15,800 ft² of office/retail/restaurant, 17,200 ft² of office/retail, 12,600 ft² of office/retail, and 14,400 ft² of office/retail/restaurant, for a total of 71,600 ft² commercial uses.

2. The total square footage of the multi-use development exceeds 500,000 square feet, which is a DRI threshold for a multi-use development set forth in the Rules of the Georgia Department of Community Affairs (DCA).

3. The trigger for DRI review was a request by the client for rezoning from R-75MOD and RA-200 to TND, RM-24, and C2.

4. The project will generate 438 new trips in the a.m. peak hour, 591 new trips in the p.m. peak hour, and 7,154 new daily trips.

5. Eleven (11) intersections were identified for evaluation in the study network plus the proposed site accesses. The beginning of this traffic study coincided with the onset of quarantining and statewide school closures due to the COVID-19 pandemic. Therefore, representative existing traffic volume counts could not be collected. Given the extraordinary circumstances, ARC and GRTA agreed to accept older traffic count data to be used for this study, adjusted by intersection, as appropriate, to develop a 2020 "existing" condition. Traffic count data was available at all but two of the eleven required study intersections. Standard ITE trip rates were used to develop volume projections at those two intersections.

6. The widening of GA 124 from two to four lane adjacent to the proposed development was identified as a programmed improvement that is expected to be built during development of this DRI. The plans for the widening include a roundabout at the GA 124 / Huntington Hill Trace / future site full-movement access intersection.

7. No mitigation was recommended in the existing condition. At the Hamilton Mill intersection, the identified mitigation of the southbound third exclusive left turn lane is considered not feasible. At Huntington Hill Trace signalization coupled with a westbound left turn lane were identified to meet the LOS D standard. However, it was noted that a roundabout is programmed for this intersection, and this

was discussed further later in the report. The remaining three intersections that do not meet the LOS D standard were identified as weak candidates for signalization. No mitigation is required in the existing condition at the intersections of GA 124 at Jim Moore Road, Pine Road, Spout Springs/Mineral Springs Roads, and the Mill Creek HS/Osborne MS accesses, or at the Spout Springs Road / Doc Hughes Road intersection.

8. No mitigation was recommended in the no-build condition. At the Hamilton Mill intersection, nothing additional or different was identified from the existing analysis. At Huntington Hill Trace, signalization would be preferable to the programmed roundabout. However, in the no-build, this intersection will continue to be a weak candidate for signalization. The remaining three intersections that do not meet the LOS D standard will continue to be weak candidates for signalization. No no-build condition mitigation is required at the intersections of GA 124 at Jim Moore Road, Pine Road, Spout Springs/Mineral Springs Roads, and the Mill Creek HS/Osborne MS accesses, or at the Spout Springs Road / Doc Hughes Road intersection.

9. The future build condition mitigation is summarized as follows:

    a. Nothing additional or different was identified from the existing and no-build analysis at the Hamilton Mill intersection.
    b. At Huntington Hill Trace, signalization would be preferable to the programmed roundabout. A signal warrant analysis should be performed to determine if this intersection will satisfy criteria for signalization. Eastbound and westbound left turn lanes and a westbound right turn lane should be added on GA 124 at this intersection if a roundabout is not constructed.
    c. The remaining three intersections that do not meet the LOS D standard will continue to be weak candidates for signalization.
    d. No mitigation is required in the build condition at the intersections of GA 124 at Jim Moore Road, Pine Road, Spout Springs/Mineral Springs Roads, and the Mill Creek HS/Osborne MS accesses, or at the Spout Springs Road / Doc Hughes Road intersection.
    e. The three RIRO site accesses will all operate acceptably. Each should be built with one entering and one exiting lane, with each exiting approach controlled by side street stop sign. A deceleration lane should be provided on the main road at each of these RIRO accesses.

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1. Project Description

This Transportation Analysis was performed for the proposed Braselton Highway and Spout Springs Road Development of Regional Impact (DRI) #3077. The site is located in the northwest quadrant of the intersection of Braselton Highway (GA 124) and Spout Springs Road / Mineral Springs Road in Gwinnett County. A location map is presented in Figure 1. The total square footage of the multi-use development exceeds 500,000 square feet, which is a DRI threshold for a multi-use development in "Maturing Neighborhoods, Established Suburbs, and Developing Suburbs" as set forth in the Rules of the Georgia Department of Community Affairs (DCA), Chapter 110-12-7, Developments of Regional Impact: Alternative Requirements – Atlanta Regional Commission. This study was performed to meet the Georgia Regional Transportation Authority's (GRTA) Development of Regional Impact non-expedited review requirements, according to the GRTA DRI Review Package Technical Guidelines.

Figure 1 – Location Map

1.1 Project Phasing, Pods, and Land Uses

The subject site is 77.9 acres and is primarily undeveloped with just a single family home and a few auxiliary structures. The project calls for rezoning of portions of the site from R-75MOD and RA-200 to TND, RM-24, and C2, and this is the trigger that initiated DRI review.

The project will consist of 524 residential units including 121 detached single family homes, 40 townhomes, and 363 multi-family units; seven (7) commercial outparcels including a 5,600 ft² restaurant, a 3,000 ft² restaurant with drive-through, another 3,000 ft² restaurant with drive-through, 15,800 ft² of office/retail/restaurant, 17,200 ft² of office/retail, 12,600 ft² of office/retail, and 14,400 ft² of office/retail/restaurant, for a total of 71,600 ft² of commercial uses.

The project will be developed in one continuous phase, with a tentative five-year build-out (2025), which will be influenced by market conditions. Table 1 presents the programmed land uses and sizes. The site plan is presented in Figure 2.

Table 1 – Braselton and Spout Springs Proposed Land Uses and Sizes

Land Use	Size
Residential	
Single Family Homes	121 homes
Multi-Family Housing (Low-Rise)	40 townhomes
Multi-Family Housing (Mid-Rise)	363 units
Residential Total	524 units
Commercial	
1. High Turnover Restaurant	5,600 ft²
2. Fast Food with Drive-Through	3,000 ft²
3. Fast Food with Drive-Through	3,000 ft²
4. Office/Retail/Restaurant*	15,800 ft²
5. Office/Retail*	17,200 ft²
6. Office/Retail*	12,600 ft²
7. Office/Retail/Restaurant*	14,400 ft²
Commercial Total	71,600 ft²

1.2 Site Plan

This study is based on the site plan for the project, prepared by Development Planning & Engineering, Inc, dated December 20, 2019, as shown in Figure 2.

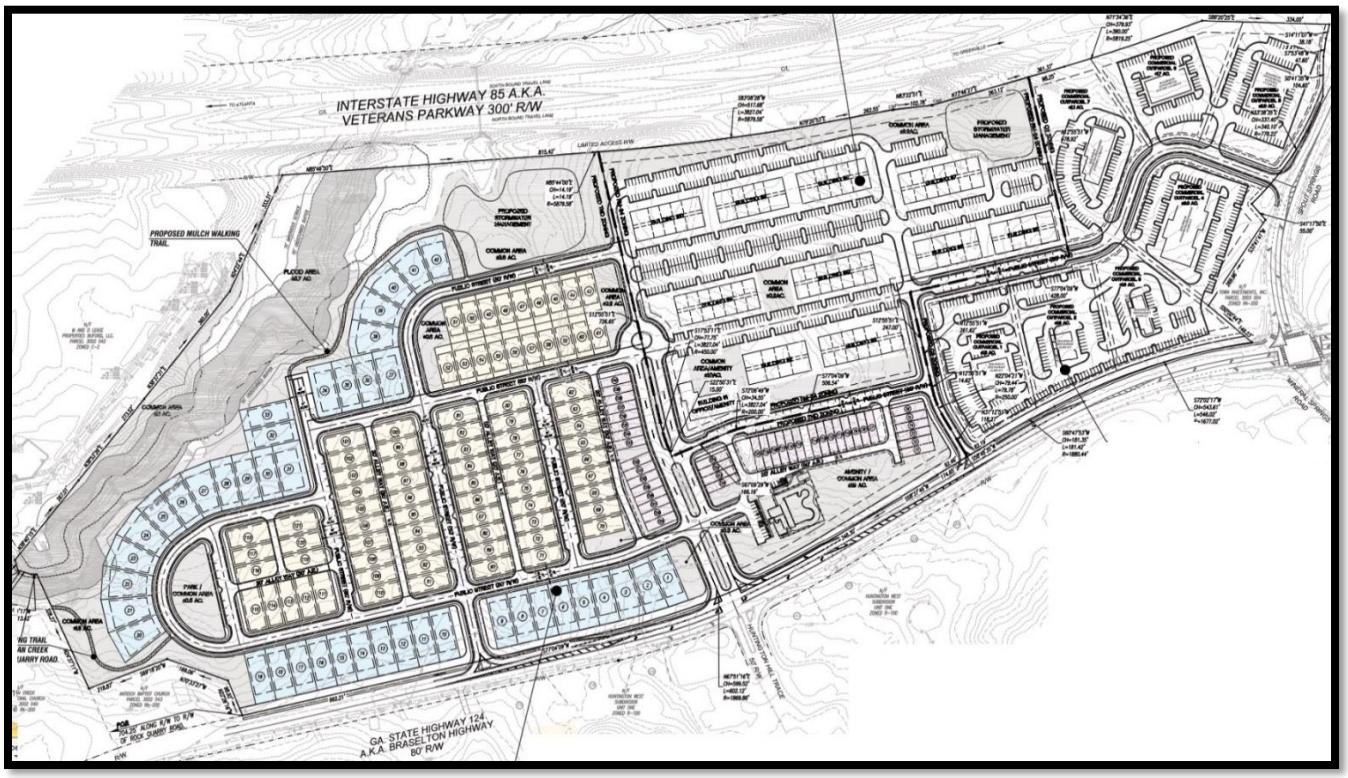

Figure 2 – Braselton and Spout Springs Site Plan

1.3 Site Vehicular Access

Vehicular access is proposed along GA 124 at two right-in/right-out (RIRO) accesses as well as a full-movement access which will align with Huntington Hill Trace. A RIRO access will also be provided on the west side of Spout Springs Road north of GA 124.

1.4 On-Site Pedestrian and Bicycle Facilities

Sidewalks will be provided on both sides of most streets within the site and connecting between the residential and commercial portions of the site. Sidewalks will also be provided along the GA 124 and Spout Springs Road frontages. A walking trail is proposed to provide access to Duncan Creek Park via Rock Quarry Road. There are no dedicated or shared striped bicycle lanes adjacent to the subject site and no dedicated bicycle lanes are proposed within the DRI.

1.5 Transit Access

Gwinnett County operates a public transit system, Gwinnett County Transit, but there is no regularly scheduled mass transit service adjacent to the subject site. Therefore, this site will not be served by regular transit service.

1.6 Parking

Parking will be provided on-site by a combination of surface parking lots and on-street parking. All parking is shown on the site plan submitted with this report. The on-site parking is summarized in Table 2.

Table 2 – Braselton and Spout Springs On-Site Parking

Land Use	Size	Spaced Required		Spaces Provided
		Ratio	Spaces	
Residential				
Single Family Homes TND	121 homes	1.5/unit	182	292
Multi-Family Housing TND	40 townhomes	1.5/unit	60	131
Multi-Family Housing RM	363 units	1.5/unit	544	545
Residential Total	524 units		786	968
Commercial				
1. High Turnover Restaurant	5,600 ft²	1/150 ft²	37	105
2. Fast Food with Drive-Through	3,000 ft²	1/150 ft²	20	72
3. Fast Food with Drive-Through	3,000 ft²	1/150 ft²	20	51
4. Office/Retail/Restaurant*	15,800 ft²	1/500 ft²	32	87
5. Office/Retail*	17,200 ft²	1/500 ft²	34	81
6. Office/Retail*	12,600 ft²	1/500 ft²	25	60
7. Office/Retail/Restaurant*	14,400 ft²	1/500 ft²	29	71
Commercial Total	71,600 ft²		197	527

Parking calculations provided by client.

2. Study Network

The study network for this project was agreed to with GRTA and specified in GRTA's revised Letter of Understanding (LOU) dated March 9, 2020. The network intersections are presented in Table 3.

Table 3 – Intersections Included in the Study Network

#	Description
1	Braselton Highway / Hamilton Mill Road
2	Braselton Highway / Jim Moore Road
3	Braselton Highway / Pine Road / Duncan Creek Park
4	Braselton Highway / Huntington Hill Trace / future site access
5	Braselton Highway / Spout Springs Road / Mineral Springs Road
6	Braselton Highway / Holman Road
7	Braselton Highway / Mill Creek High School right-in/right-out access
8	Braselton Highway / Mill Creek High School signalized access
9	Braselton Highway / Duncan Creek Elementary School West Access / Kings Cross Way
10	Braselton Highway / Duncan Creek Elementary School East Access
11	Spout Springs Road / Doc Hughes Road
12,13,14	site right-in / right-out accesses

2.1 Peak Time Periods and Analysis Conditions

All analyses are performed for the weekday a.m. peak hour (generally counted 7:00-9:00 a.m.) and the weekday p.m. peak hour (generally counted 4:30-6:30 p.m.). The existing 2020, 2025 no-build, and 2025 build conditions are evaluated.

2.2 Level of Service Standard

The level of service standard is that level of service considered to be the minimum that provides acceptable operating conditions. A level of service (LOS) standard of D is used for suburban and urban areas, and for this study an LOS D standard was applied to all facilities. In the facilities needs analysis, mitigation is developed with LOS D as the minimum goal. Appendix B includes a description of the methodology used for the intersection analysis.

3. Existing Transportation Facilities

This section provides a description of the existing transportation infrastructure that will serve the proposed Braselton Highway and Spout Springs Road DRI. An inventory was performed of the lanes and method of control at the existing traffic facilities in the vicinity of the site. The availability of transit, bicycle, and pedestrian facilities adjacent to the site was also reviewed. Figure 4 in the Existing Traffic Analysis section of this report depicts the existing lanes and control for the intersections in the study network. The following is a brief description of each of these facilities.

3.1 Braselton Highway (GA 124)

Braselton Highway (Georgia State Route 124) is an urban minor arterial with a general east/west orientation in the vicinity of the subject site. There is one through travel lane per direction adjacent to the site, with exclusive turn lanes at most major intersections. Development along the adjacent segment of GA 124 includes low density single family residential, undeveloped land, small spot retail such as gasoline stations, and, a short distance to the east, three large County schools including a high school, middle school, and elementary school, all with access along the north side of GA 124. The terrain along the adjacent segment of GA 124 is very gently rolling and the posted speed limit is 45 mph, dropping to 35 mph in the school zone to the east and dropping to 35 mph west of Jim Moore Road. In 2018 (the latest year for which data was available at the time of this study) the Georgia Department of Transportation (Georgia DOT) recorded an Annual Average Daily Traffic (AADT) volume of 17,300 vehicles per day (vpd) on GA 124 east of Spout Springs Road.

3.2 Spout Springs Road / Mineral Springs Road

Spout Springs Road / Mineral Springs Road is a north/south urban minor collector with two through travel lanes and with exclusive turn lanes at most major intersections. Spout Springs Road crosses Interstate 85 just north of GA 124, but no interchange is provided. The land along these roads is primarily developed with low density single family homes, residential subdivisions, undeveloped land, and churches. The terrain is gently rolling and the posted speed limit is 40 mph. The 2018 Georgia DOT AADT on Spout Springs Road north of Interstate 85 was 7,730 vpd.

3.3 Hamilton Mill Road / Hamilton Mill Parkway

Hamilton Mill Road (north of GA 124, Hamilton Mill Parkway south of GA 124) is a north/south urban minor collector with four through travel lanes and with exclusive turn lanes at most major intersections, including dual southbound left turn lanes at GA 124. GA 124 has dual eastbound left turn lanes and dual westbound right turn lanes at Hamilton Mill Road. There is a full diamond interchange on Hamilton Mill Road at Interstate 85 just north of GA 124. The land along Hamilton Mill Road near Interstate 85 and GA 124 is developed with retail shopping

centers, while the land along Hamilton Mill Parkway is developed with residential subdivisions and a large golf course. The terrain is gently rolling and the posted speed limit is 45 mph north of GA 124 and 40 mph south of GA 124. The 2018 Georgia DOT AADT on Hamilton Mill Road south of Interstate 85 was 36,400 vpd.

3.4 Minor Roadways

Several of the roadways in the study network are smaller local roads with two lanes. This includes Jim Moore Road, Pine Road, Holman Road, and Doc Hughes which are minor collectors; Huntington Hill Trace and Kings Cross Way which are local subdivision streets, and the four internal roadways to the area schools at the eastern end of the study network. Jim Moore, Pine, and Doc Hughes Roads, and the Mill Creek HS / Osborne MS eastern access, are all signalized at GA 124 (Spout Springs for Doc Hughes) while the other streets and school accesses are side street stop sign controlled at GA 124. The terrain on these streets range from level to gently rolling. The posted speed limit is 25 mph on Jim Moore, 35 mph on Pine, 25 mph on Huntington Hill, 35 mph on Holman, 25 mph on Kings Cross, and 35 mph on Doc Hughes.

3.5 Transit Service

Gwinnett County operates a public transit system, Gwinnett County Transit, but there is no regularly scheduled mass transit service adjacent to the subject site.

3.6 Bicycle and Pedestrian Facilities

There are no striped designated bicycle lanes in the immediate vicinity of the proposed DRI. Sidewalk or a walking trail is provided along GA 124 west of Rock Quarry Road. There is no sidewalk along GA 124 adjacent to the DRI site. There is a short segment of sidewalk along the south side of GA 124 from Mineral Springs Road to Holman Road and just into Holman Road. Sidewalk is available along the east side of Spout Springs Road north of GA 124 and on both sides of the new bridge over Interstate 85. There are crosswalks and pedestrian signals at all of the signalized intersection in this study. Sections of sidewalk are provided to the east along GA124, near the schools and the signal at the main school access is equipped with pedestrian signals and crosswalks.

3.7 Photographs of Existing Facilities

Photographs 1 through 14 document the existing conditions at the study intersections.

Photograph 1 – GA 124 Facing West at Hamilton Mill Road

Photograph 2 – GA 124 Facing East at Jim Moore Road

Photograph 3 – GA 124 Facing East at Pine Road

Photograph 4 – GA 124 Facing West in Vicinity of Proposed Site West RIRO Access

Photograph 5 – GA 124 Facing East at Huntington Hill Trace

Photograph 6 – GA 124 Facing East in Vicinity of Proposed Site East RIRO Access

Photograph 7 – Spout Springs Road Facing South at GA 124

Photograph 8 – GA 124 Facing East at Holman Road

Photograph 9 – GA 124 Facing West Toward Mill Creek HS Right-In / Right-Out Access

Photograph 10 – GA 124 Facing West Toward Mill Creek HS / Osborne MS Signalized Access

Photograph 11 – GA 124 Facing West Toward Duncan Creek ES West Access / Kings Cross Way

Photograph 12 – GA 124 Facing East Toward Duncan Creek ES East Access

Photograph 13 – Spout Springs Road Facing North at Doc Hughes Road

Photograph 14 – Spout Springs Road Facing North in Vicinity of Proposed Site RIRO Access

4. Project Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed Braselton Spout Springs DRI, including a site description, how much traffic the project will generate, and where that traffic will travel.

4.1 Trip Generation

Trip generation is an estimate of the number of entering and exiting vehicular trips that will be generated by the proposed Braselton Spout Springs DRI. Trip generation was calculated using the standard rates and equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *10th edition – with Supplement*.

The gross trip generation for the single family homes was calculated using ITE Land Use 210 – Single-Family Detached Housing. The townhome trips were calculated using Land Use 220 – Multi-Family Housing (Low-Rise) while the multi-family trips used Land Use 221 – Multi-Family Housing (Mid-Rise). The trip generation for the high turnover restaurant used Land Use 932 – High-Turnover Restaurant while the trips for the fast food restaurants used Land Use 934 – Fast Food Restaurant with Drive-Through Window. The trips for the other commercial buildings were calculated using Land Use 820 – Shopping Center. These buildings will contain a mix of tenants including retail shops, restaurants, and small offices.

Several adjustments can be made to the gross trips, depending on conditions. These typically include a multi-use adjustment, a reduction for transit use, and a pass-by reduction. The multi-use adjustment accounts for the synergy between compatible uses within the development, such as internal trips between the homes and the retail shops. In this case the multi-use adjustments were calculated to be extremely low, in the low single-digits. Since these numbers were so low, it was decided to omit this reduction, since it will have no effect on the analysis. No regularly-scheduled transit is available in this vicinity and, therefore, no transit adjustment was applied.

An adjustment was made to the retail and restaurant gross trips to account for the effect of pass-by trips. Pass-by trips are trips that are already driving by the property, but will be intercepted by the retail and dining opportunities in the Braselton Spout Springs project. These trips are new to the project driveways, but do not represent new trips to the adjacent roadways, since they are currently occurring and are, therefore, included in the existing traffic volume counts. The ITE *Trip Generation Handbook, 3rd Edition* provides formulas and average rates for the pass-by percentages for certain retail and restaurant land uses. Land Use 932 – High-Turnover Restaurant has an average p.m. peak hour pass-by percentage of 43%, and 33% was used for the a.m. and 24-hour trips. Land Use 934 – Fast Food Restaurant with Drive-Through Window has an average a.m. pass-by percentage of 49% and a p.m. pass by percentage of 50%, while 49% was used for the 24-hour trips. Land Use 820 – Shopping Center has a p.m. pass-by percentage of 34%. This was reduced by 5% to account for some office uses within these buildings. For these commercial buildings, a 29% pass-by reduction was applied to the p.m. trips, while a 19% reduction was applied to the a.m. and 24-hour trips.

Table 4 presents the trip generation for the Braselton Spout Springs DRI.

Table 4 – Braselton Spout Springs Trip Generation

Land Use	ITE Code	Size	AM Peak Hour			PM Peak Hour			24-Hour
			Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way
Single-Family Homes	210	121 units	23	68	91	77	45	122	1,240
Townhomes	220	40 units	5	15	20	16	10	26	262
Apartments	221	363 units	31	90	121	93	60	153	1,978
Residential New Trips		***524 units***	***59***	***173***	***232***	***186***	***115***	***301***	***3,480***
1. High Turnover Rest	932	5,600 ft²	31	25	56	34	21	55	628
-pass-by trips		33/43/33%	-10	-8	-18	-15	-9	-24	-207
2. Fast Food with D/T	934	3,000 ft²	61	60	121	51	47	98	1,414
3. Fast Food with D/T	934	3,000 ft²	61	60	121	51	47	98	1,414
Fast Food Total Gross Trips		6,000 ft²	122	120	242	102	94	196	2,828
-pass-by trips		49/50/49%	-60	-59	-119	-51	-47	-98	-1,386
4. Office/Retail/Rest*	820	15,800 ft²	9	5	14	27	30	57	566
5. Office/Retail*	820	17,200 ft²	10	6	16	31	35	66	650
6. Office/Retail*	820	12,600 ft²	7	5	12	23	25	48	476
7. Office/Retail/Rest*	820	14,400 ft²	8	6	14	26	29	55	544
Office/Retail/Rest Gross		60,000 ft²	34	22	56	107	119	226	2,236
-pass-by trips		19/29/19%**	-6	-4	-11	-31	-35	-66	-425
Commercial Gross Trips		71,600 ft²	187	167	354	243	234	477	5,692
-pass-by trips			-76	-71	-148	-97	-91	-187	-2,018
Commercial New Trips			***111***	***96***	***206***	***146***	***143***	***290***	***3,674***
Total Project Gross Trips			246	340	586	429	349	778	9,172
-pass-by trips			-76	-71	-148	-97	-91	-187	-2,018
Total Project New Trips			***170***	***269***	***438***	***332***	***258***	***591***	***7,154***

*Shopping Center land use due to unknown mix of tenants. Average trip rates applied because sizes are significantly below average sizes.

**Pass-by reduced by 5% to account for some office tenants.

4.2 Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The trip distribution percentages for the retail, restaurants, office were developed based on population densities in the area and the distances of those populations to the site (an approximation of a gravity model). The trip distribution for the residential uses was developed based on the locations and proximity of likely trip origins and destinations, such as other retail and offices in the area, other regional trip attractors and employment centers such as the Cities of Atlanta, Lawrenceville, Gainesville, the Mall of Georgia area, area schools, and the major routes of travel to those attractors, including Interstate 85. The distances to these trip attractors were considered, but less so than for the retail distribution percentages. The new project trips, shown in Table 4, were assigned to the roadway network based on the percentages for each land use grouping, residential or commercial. The trip distribution percentages and the a.m. and p.m. peak hour trips expected to be generated by the Braselton Spout Springs DRI, are shown in Figure 3.

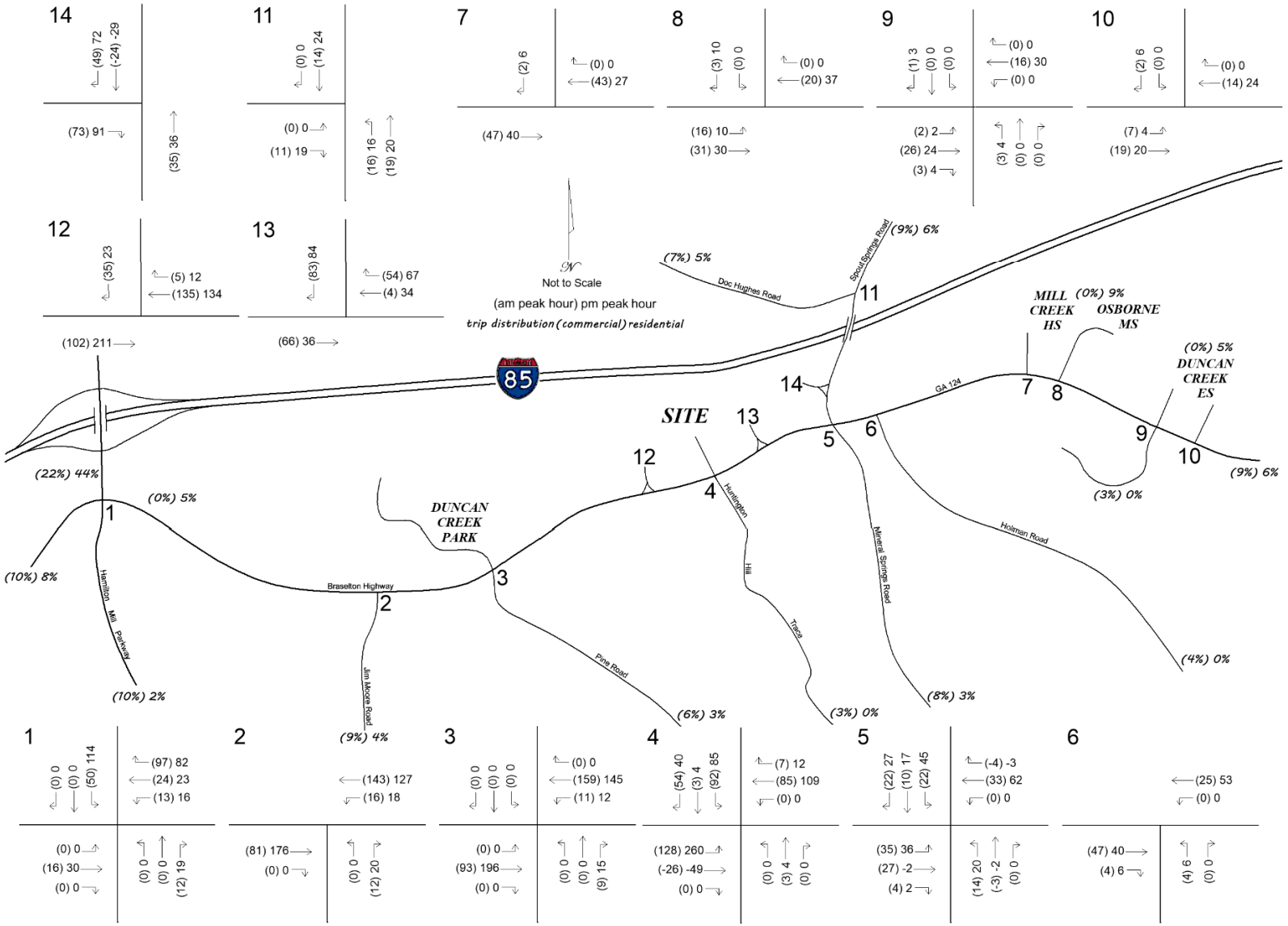

Figure 3 – Weekday A.M. and P.M. Peak Hour Site Trips and Distribution Percentages

5. Existing Traffic Analysis

This chapter presents the results of the capacity analysis and facilities needs analysis for the existing condition.

5.1 Existing Lanes and Traffic Control

A description of the existing conditions was provided previously in this report. Figure 4 presents the existing lane configuration and method of traffic control at each study intersection.

5.2 Existing Traffic Volumes

The beginning of this traffic study coincided with the onset of quarantining and statewide school closures due to the COVID-19 pandemic. The roads in the study network, and throughout the state, saw dramatic decreases in volumes, and the four intersections in this study that are located at school accesses saw essentially zero side street volumes during the time of this study. Therefore, representative existing traffic volume counts could not be collected. Given the extraordinary circumstances, ARC and GRTA agreed to accept older traffic count data to be used for this study, adjusted by intersection, as appropriate, to develop a 2020 "existing" condition. Sources of previously-collected morning and evening peak hour intersection turning movement counts included previous studies conducted by Marc R Acampora, PE, LLC, traffic data collection companies, and Gwinnett County.

Traffic count data was available at all but two of the eleven required study intersections – the two accesses to Duncan Creek Elementary School. At those intersections, side street traffic volume projections were developed using the ITE *Trip Generation Manual, 10th Edition – with Supplement*. For the Duncan Creek ES approaches, ITE Land Use 520 – Elementary School was used. Gwinnett County advised that the 2020 student enrollment at the school was 1,249 students and that was used as the independent variable. Aligning with the west access to Duncan Creek ES is the single access point to the Brentwood Place subdivision – Kings Cross Way. Using Google Maps aerial photography, it was determined that the subdivision contains 117 houses. ITE Land Use 210 – Single-Family Detached Housing was used to project the side street volumes on Kings Cross Way. The Duncan Creek ES trips were assigned to the two intersections based on the turn movement volumes at the two accesses to Mill Creek High School / Frank N Osborne Middle School. The Brentwood Place trips were assigned based on the turn movement volumes counted at Huntington Hill Trace, which also provides sole access to a residential subdivision (Huntington West).

The peak hour count data was generally collected from 7:00 a.m. to 9:00 a.m. and from 4:30 p.m. to 6:30 p.m. From the collected peak hour traffic counts, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, morning and evening, were determined. These volumes make up the typical weekday a.m. and p.m. peak hour traffic volumes at that intersection. Growth factors were then applied to the peak hour counts for the number of years the counts were collected before 2020. Historic Georgia DOT traffic

volume data was collected in the study area for the Methodology Meeting and a 2% annual growth rate was agreed upon in the Letter of Understanding for developing future volume projections. For the most part, that 2% annual rate was generally applicable for the past few years. Therefore, at most intersections, the collected traffic counts were increased by 2% per year for the number of years from the count date to 2020. However, east of Spout Springs Road, the Georgia DOT data showed an almost flat growth rate. In addition, the student enrollment data obtained from Gwinnett County revealed slight decreases in student enrollment at all three schools in the study corridor along Braselton Highway east of Spout Springs Road. From 2018 to 2020, Mill Creek HS saw a decrease from 3,699 students to 3,640. During the same time, Osborne MS saw a decrease from 1,715 to 1,703 students and Duncan Creek ES saw a decrease from 1,378 to 1,249 students. All of the available counts in this study from Spout Springs Road to the east were collected in 2018. Due to the almost flat historic volume growth trend on GA 124 east of Spout Springs Road and the decrease in students at the three schools in that corridor, no growth factor was applied to the counts at the intersections east of Spout Springs Road – the 2018 count data was used as the 2020 condition at those intersections.

The "existing", adjusted to 2020, a.m. and p.m. peak hour turning movement volumes are shown in Figure 5. All intersection raw count data is found in Appendix A.

In addition to the intersection turning movement counts, Georgia DOT Annual Average Daily Traffic (AADT) volume counts were obtained on nearby roadways, as available. The 2018 AADT volumes include: GA 124 east of Spout Springs Road: 17,300 vehicles per day (vpd), Spout Springs Road north of Interstate 85: 7,730 vpd, and Hamilton Mill Road south of Interstate 85: 36,400 vpd. Table 8, presented in the No-Build Traffic Analysis section of this report, shows these historic Georgia DOT counts and the annual growth rates between the counts.

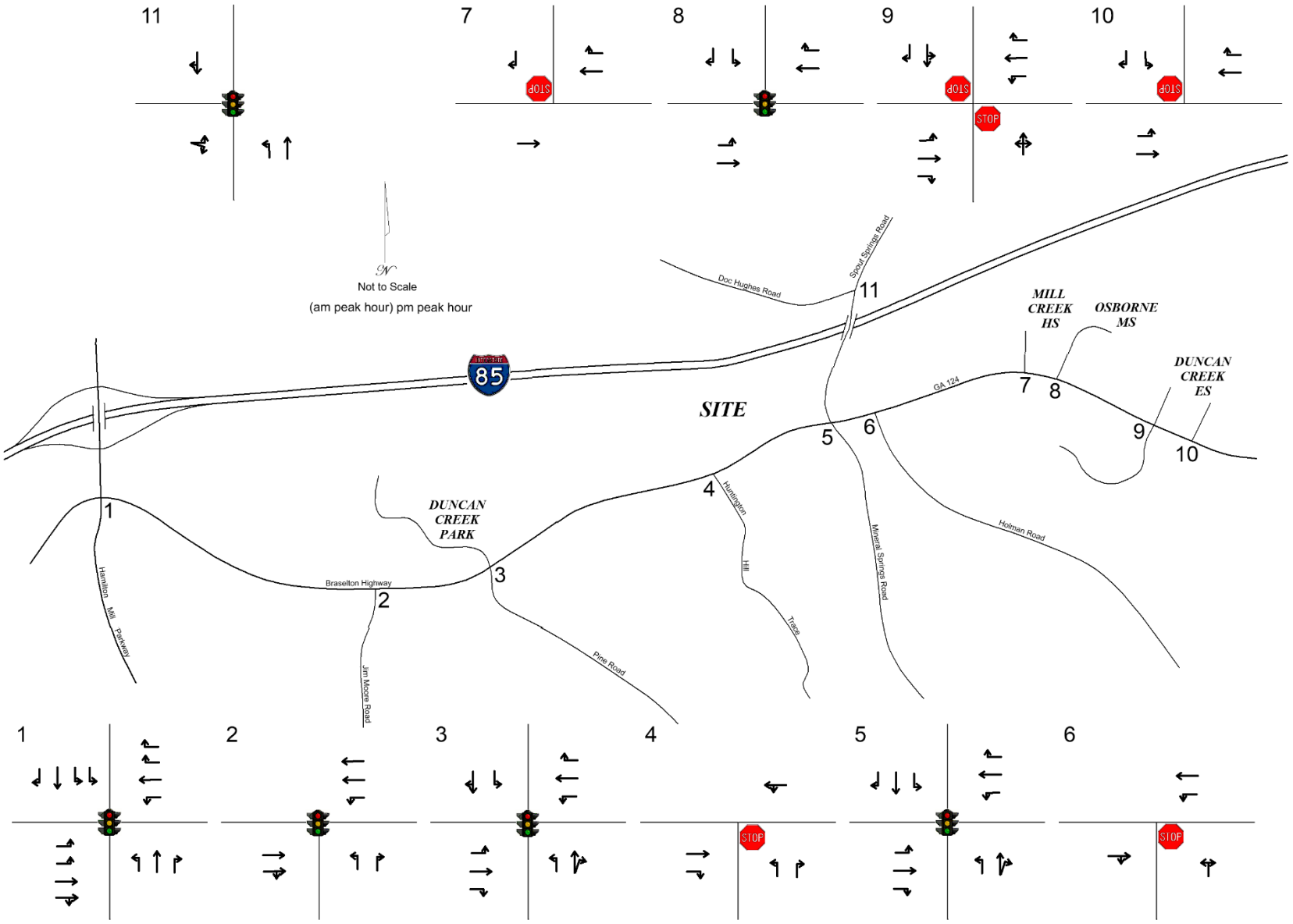

Figure 4 – Existing Lane Configuration and Traffic Control

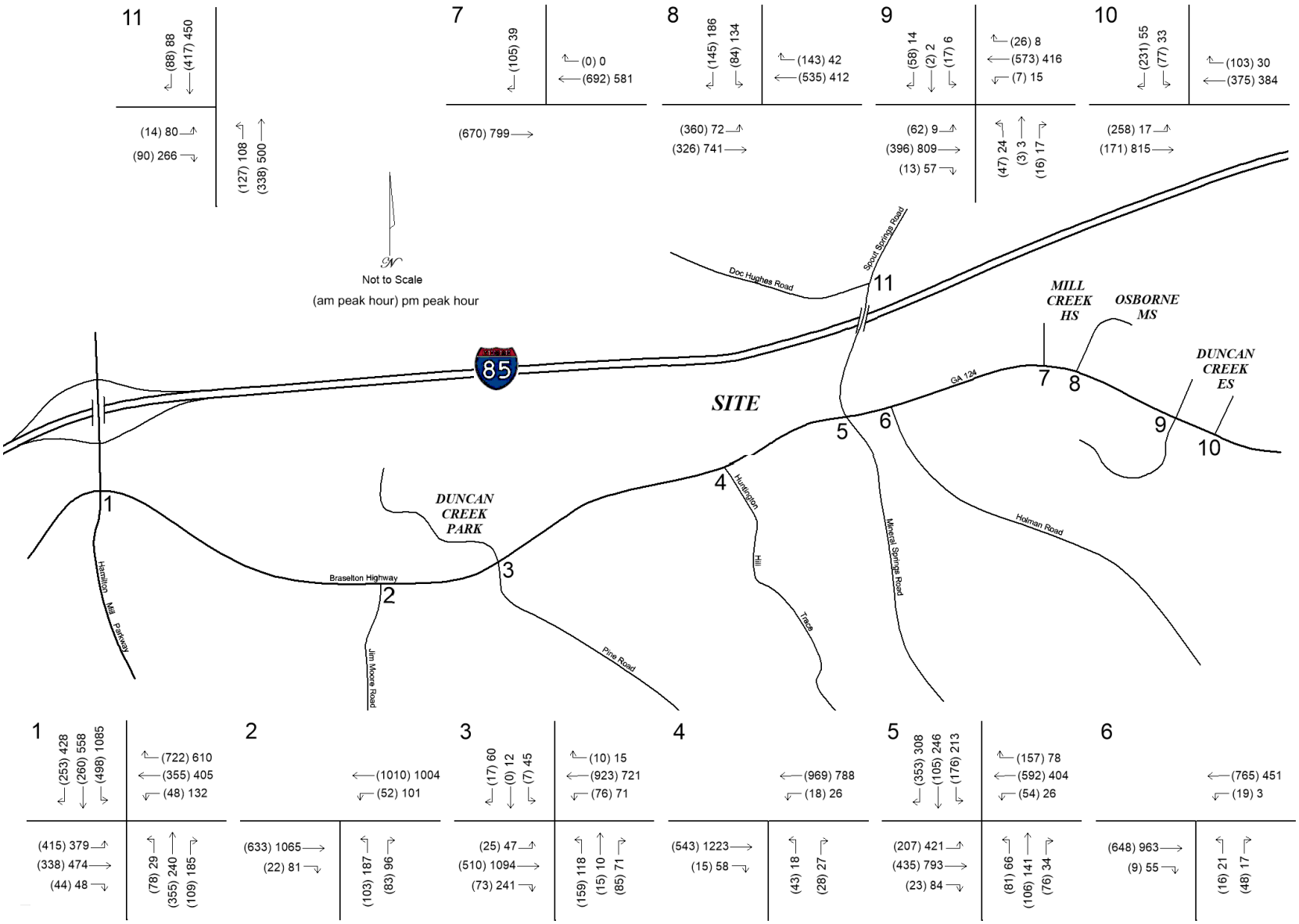

Figure 5 – 2020* A.M. and P.M. Peak Hour Volumes *see text

5.3 Existing Intersection Operations

An analysis was performed for each study intersection, based on the counted/adjusted 2020 traffic volumes, existing lane configurations, and method of traffic control. The results of the analysis are shown in Table 5. All locations that do not satisfy the Level of Service D standard are highlighted with bold text. The Synchro computer worksheets for the existing analysis are presented in Appendix C.

Table 5 – Existing Intersection Levels of Service

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Braselton Highway / Hamilton Mill Road	D	45.9	D	53.6
northbound approach	D	41.3	***E***	***76.1***
southbound approach	D	45.4	D	46.1
eastbound approach	***E***	***66.7***	***E***	***76.0***
westbound approach	C	32.6	D	40.0
2. Braselton Highway / Jim Moore Road	B	14.3	B	11.9
northbound approach	B	13.9	C	26.6
eastbound approach	B	13.2	B	10.0
westbound approach	B	15.2	B	10.2
3. Braselton Highway / Pine Road / Duncan Creek Park	C	25.0	C	27.4
northbound approach	D	38.1	D	49.0
southbound approach	C	28.6	D	39.6
eastbound approach	B	13.2	C	31.2
westbound approach	C	27.8	B	13.3
4. Braselton Highway / Huntington Hill Trace	A	2.5	A	2.8
northbound left turn	***F***	***80.3***	***F***	***186.4***
northbound right turn	B	13.4	D	28.5
westbound left turn	A	9.0	B	12.7
5. Braselton Hwy / Spout Springs Rd / Mineral Springs Rd	C	30.3	C	32.4
northbound approach	C	32.8	C	34.9
southbound approach	D	41.4	C	34.0
eastbound approach	B	18.1	C	27.4
westbound approach	C	30.9	D	40.6
6. Braselton Highway / Holman Road	A	2.4	A	1.4
northbound approach	***E***	***35.2***	***E***	***44.0***
westbound left turn	A	9.3	B	11.1

continued on next page

7. Braselton Highway / Mill Creek HS RIRO	A	1.9	A	1.4
southbound approach	C	23.0	C	20.7
8. Braselton Highway / Mill Creek HS Main Access	C	22.3	C	25.9
southbound approach	C	30.1	C	28.8
eastbound approach	B	16.3	C	25.0
westbound approach	C	24.3	C	22.8
9. Braselton Hwy / Duncan Creek ES West / Kings Cross Wy	A	5.2	A	2.2
northbound approach	***F***	***54.7***	***E***	***41.5***
southbound left turn	***E***	***35.2***	***E***	***43.0***
southbound right turn	B	14.1	B	11.2
eastbound left turn	A	9.2	A	8.3
westbound left turn	A	8.2	A	10.0
10. Braselton Highway / Duncan Creek ES East Access	B	10.5	A	2.0
southbound left turn	***F***	***59.5***	***E***	***38.7***
southbound right turn	C	16.5	B	12.0
eastbound left turn	A	9.6	A	8.5
11. Spout Springs Road / Doc Hughes Road	A	5.8	B	10.2
northbound approach	A	4.7	A	8.5
southbound approach	A	4.6	A	7.9
eastbound approach	B	14.5	B	16.3

5.4 Existing Facilities Needs Analysis

The analysis of existing conditions reveals that several locations do not meet the LOS D standard. These are summarized in Table 6, with a discussion of mitigation at each location following the table.

Table 6 – Existing Locations that Do Not Meet LOS D Standard

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Braselton Highway / Hamilton Mill Road				
northbound approach			*E*	*76.1*
eastbound approach	*E*	*66.7*	*E*	*76.0*
4. Braselton Highway / Huntington Hill Trace				
northbound left turn	*F*	*80.3*	*F*	*186.4*
6. Braselton Highway / Holman Road				
northbound approach	*E*	*35.2*	*E*	*44.0*
9. Braselton Hwy / Duncan Creek ES West / Kings Cross Wy				
northbound approach	*F*	*54.7*	*E*	*41.5*
southbound left turn	*E*	*35.2*	*E*	*43.0*
10. Braselton Highway / Duncan Creek ES East Access				
southbound left turn	*F*	*59.5*	*E*	*38.7*

Intersection 1 – Braselton Highway and Hamilton Mill Road / Hamilton Mill Parkway

This intersection overall operates at LOS D in both the a.m. and p.m. peak times, but extremely high volumes on certain movements result in some approaches operating at LOS E. The long cycle length of 145 seconds contributes to some of the delays. Signal timing changes are generally not considered a form of mitigation, and the signal timing here works in coordination with nearby signals such that changes in signal timing here would necessitate adjustments at other intersections that were outside the scope of this study. That said, it is advised that a reduction in cycle length does allow all movements at this intersection to satisfy the LOS D standard in the a.m. with no other mitigation. Therefore, it is recommended that consideration be given to reducing the cycle length in this corridor.

The heaviest demand at this intersection is on the movement pair of the southbound left turn and the westbound right turn. Both of these movements are already served by dual exclusive turn lanes. The other very heavy turn movement pair is the southbound right turn and the eastbound left turn. The eastbound left turn is served by dual left turn lanes but the southbound right only has a single exclusive right turn lane. Adding a second right turn lane would require a second westbound receiving lane on GA 124. Capacity for this movement can be increased

by the installation of a southbound right turn overlap phase which would provide a protected green arrow concurrently with the eastbound protected left turn phase.

Every movement could benefit from additional lane capacity at this intersection. The eastbound and westbound throughs on GA 124 and the northbound and southbound throughs on Hamilton Mill are all served by single through lanes. All would benefit from additional through capacity. However, after multiple combinations of mitigation were tested, including overlap phases and additional lanes, the single most beneficial improvement is the addition of a third southbound exclusive left turn lane. This third turn lane, coupled with a reduction in cycle length to 90 seconds, will allow all approaches to meet the LOS D standard in both the a.m. and p.m. peak hours. A third southbound left turn lane would require a third eastbound receiving lane on GA 124. Since this is likely not feasible, it is concluded that there is no feasible mitigation that can be implemented at this intersection that will allow every movement to operate at LOS D or better during all peak times. That said, it is noted that this intersection does operate reasonably well given the very heavy conflicting demands. As volumes increase in the future, the County and Georgia DOT will need to assess large scale corridor and area improvements which may include a combination of additional through capacity on GA 124 coupled with other regional improvements that may relieve demand at this intersection.

Intersection 4 – Braselton Highway and Huntington Hill Trace

The failure at this intersection is on the northbound left turn movement exiting Huntington Hill Trace, which incurs high delays during the morning and evening peak times. This is not unusual on side street stop sign controlled approaches at busy thoroughfares such as GA 124. In order to mitigate those left turn delays, this intersection would require a change in control from side street stop sign to either a signal or a roundabout. A programmed widening of GA 124 has been identified, discussed later, which includes construction of a roundabout at this intersection. This roundabout would mitigate the side street delays, but will introduce new delays on GA 124. This is discussed further, later in this report. An alternative to the roundabout would be signalization. A signal would also introduce new delays to GA 124. A westbound left turn lane on GA 124 would reduce those delays. With signalization and the westbound left turn lane, this intersection would meet the LOS D standard for all approaches in both a.m. and p.m. peak times.

Intersections 6, 9, and 10 – Braselton Highway and Holman Road, Kings Cross Way, and Duncan Creek ES East Access

The failure at all three of these intersections is the same as at Huntington Hill Trace – the heavy delays incurred by the stop sign controlled side street left turns. As noted above, this is not unusual on side street stop sign controlled approaches on busy thoroughfares. Mitigation at each intersection would require change in control, which may include signalization or roundabouts. The side street volumes turning from Holman Road are low. Those low volumes, coupled with the intersection's proximity to the signal at Spout Springs Road, make this intersection a weak candidate for alternate control. Due to the acute peaking at the Duncan Creek ES accesses,

police officer control may be an appropriate alternative form of control. This is a common practice at school entrances and it is possible that this measure is already employed. (This study was performed during the COVID-19 pandemic when all schools were closed, so, while observations were made at all study intersections, typical operating conditions at the school accesses were not observable). The side street volumes on Kings Cross Way are fairly low and are not sufficient to satisfy volume-based warrants for signalization.

5.5 Summary of Existing Mitigation

At this point in the transportation analysis a table or graphic is typically provided summarizing the recommended mitigation for the existing conditions. However, in this instance, no mitigation has been definitively recommended. At the Hamilton Mill intersection, the identified mitigation of the southbound third exclusive left turn lane is considered not feasible and it was advised that 1) the overall intersection operates reasonably well and 2) larger-scope improvements will be necessary as volumes grow. At Huntington Hill Trace a change in control was identified and signalization coupled with a westbound left turn lane were identified to meet the LOS D standard. However, it was noted that a roundabout is programmed for this intersection, and this will be discussed in the next section of this report. The remaining three intersections that do not meet the LOS D standard were identified as weak candidates for signalization. Police control was noted as a possible form of mitigation at the Duncan Creek ES accesses, and it is noted that such control may already be in effect when these schools are operational.

6. No-Build Traffic Analysis

A no-build analysis condition was developed for the DRI's build-out year of 2025. The no-build analysis provides a reference by which to measure the traffic impact of the proposed Braselton Spout Springs DRI.

6.1 Programmed Infrastructure Projects

Programmed transportation infrastructure projects in the vicinity of the DRI site were researched. Project data was obtained from the Atlanta Regional Commission's (ARC) Regional Transportation Plan (RTP) and Gwinnett County. Three projects were identified. These projects are listed in Table 7.

Table 7 – Programmed Transportation Infrastructure Projects

Project	Description	Network Year
GW-386	I-85 widening from I-985 to GA 53 from 4/5 lanes to 6/7 lanes	2030 funding authorized
GW-415	ITS enhancements along GA 124	TBD
GW-422 F-0835-01	GA 124 widening from 2 to 4 lanes from Pine Road to Spout Springs Road	2030 in ROW acquisition

The first two listed projects either will not directly impact the study intersections or will occur at an unknown date and were therefore not included in the analysis. GW-422, the widening of GA 124 from two to four lanes adjacent to the proposed DRI site, was identified by Gwinnett DOT as entering the ROW acquisition phase and completion is anticipated before the 2025 buildout of the subject DRI. Therefore, this project will be taken into consideration when developing future recommendations. The plans for this widening include the construction of a roundabout at the intersection of GA 124 at Huntington Hill Trace. The no-build lane configuration and method of traffic control is presented in Figure 6.

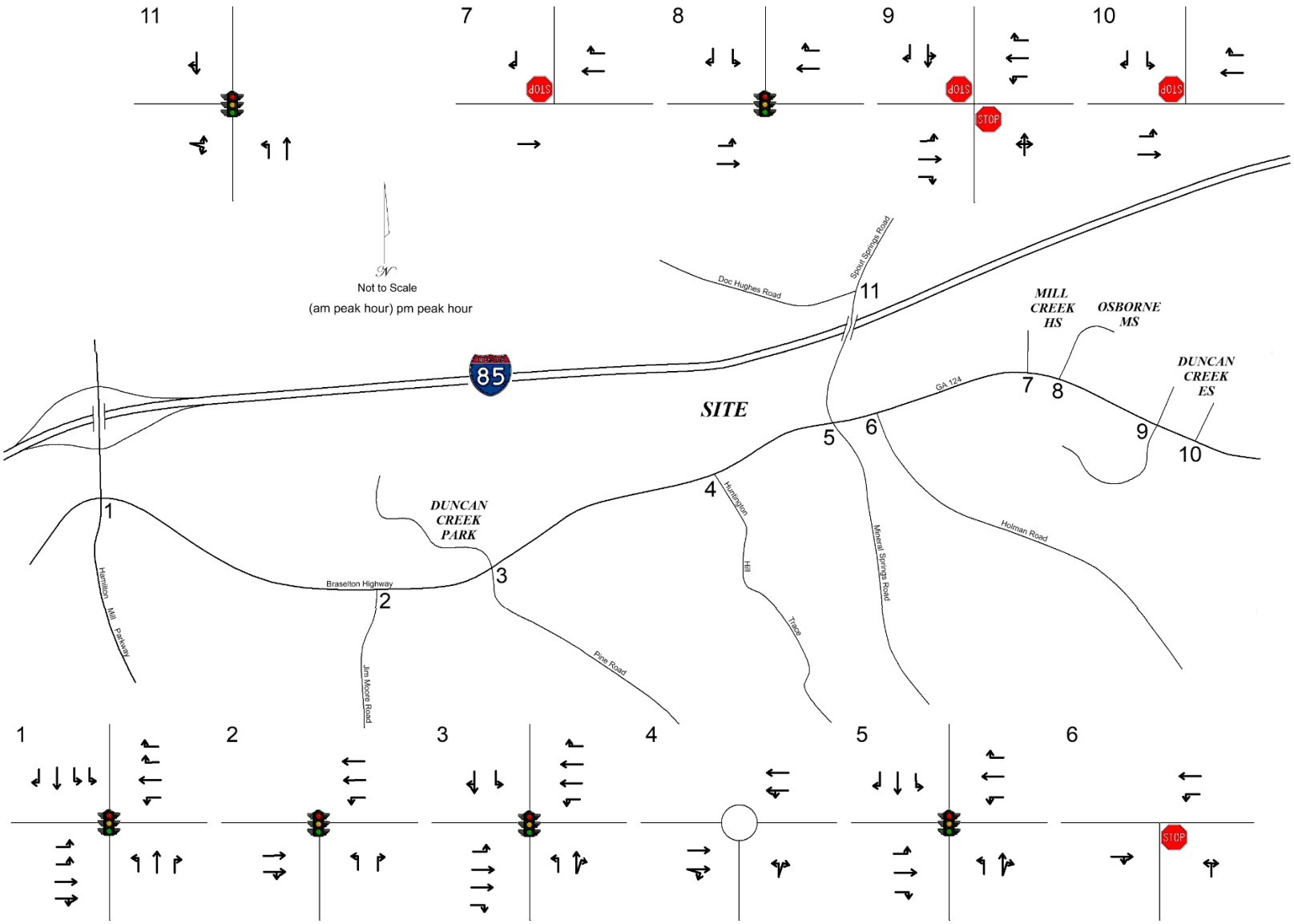

Figure 6 – No-Build Lane Configuration and Traffic Control

6.2 No-Build Traffic Volumes

The no-build condition includes background increases in traffic volumes that will occur whether or not the Braselton Spout Springs DRI is built. Georgia DOT historic traffic volume count data was collected at the Georgia DOT count stations closest to the subject development. The data was obtained for the five years 2014 through 2018 (the last year for which data was available at the time this study was performed). This data was used to develop annual growth rates for each year, and an overall growth percentage from 2014 to 2018. Table 8 presents this historic Georgia DOT data and the growth rates.

Table 8 – Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates

Year	GA 124 E of Spout Springs	Annual Growth	Spout Springs N of I-85	Annual Growth	Hamilton Mill S of I-85	Annual Growth
Station ID	135-0209		135-7360		138-0487	
2014	17,100		6,110		35,000	
2015	18,400	7.6%	7,280	19.1%	34,400	-1.7%
2016	17,900	-2.7%	7,460	2.5%	35,200	2.3%
2017	18,900	5.6%	7,610	2.0%	35,900	2.0%
2018	17,300	-8.5%	7,730	1.6%	36,400	1.4%
Average Growth		0.3%		6.1%		1.0%

Based on a review of the overall trends, and the annual fluctuations, an annual growth rate of 2.0%, for five years, to the anticipated project build-out year of 2025, was chosen and agreed to by GRTA and ARC. This equates to a growth rate of 10.4% applied to the counts that were obtained for this study (and adjusted to 2020). This growth rate will account for increases in volumes due to general growth and development in the area.

Two other specific projects were also factored into the no-build volumes – a subdivision under construction on the north side of GA 124 east of Holman Road, and the proposed Seckinger High School. The trips that will be generated by the proposed subdivision were developed in a traffic impact study for that project by Marc R Acampora, PE, LLC, dated August 28, 2018. The proposed Seckinger HS will be located on Sardis Church Road east of Hamilton Mill Road. The school will provide relief for Mill Creek HS, but is expected to draw trips from Jones MS and Ivy Creek, Harmony, and Patrick ESs. However, the final districting boundaries were not yet available at the time of this study. Some of the relief to Mill Creek HS will be from future growth. It was uncertain how much of a reduction would occur in the Mill Creek HS enrollment from Seckinger HS, and how much would be offset in the upcoming years by increases in Mill Creek HS enrollment due to new development in the area. Therefore, a

modest 10% reduction was made in the volumes entering and exiting Mill Creek ES, and these reductions were extrapolated to the other study intersections.

The 2025 no-build volumes consist of the 2020 volumes, increased by the 10.4% background growth factor, plus the trips from the under-construction subdivision east of Holman Road and the adjustment for the effect of Seckinger HS. Figure 7 shows the no-build weekday a.m. and p.m. peak hour traffic volumes at the study intersections. These are the traffic volumes that will be at each study intersection when the Braselton Spout Springs DRI is completed and fully operational, but excluding the DRI's trips. These volumes are also shown in the intersection volume worksheets in Appendix A.

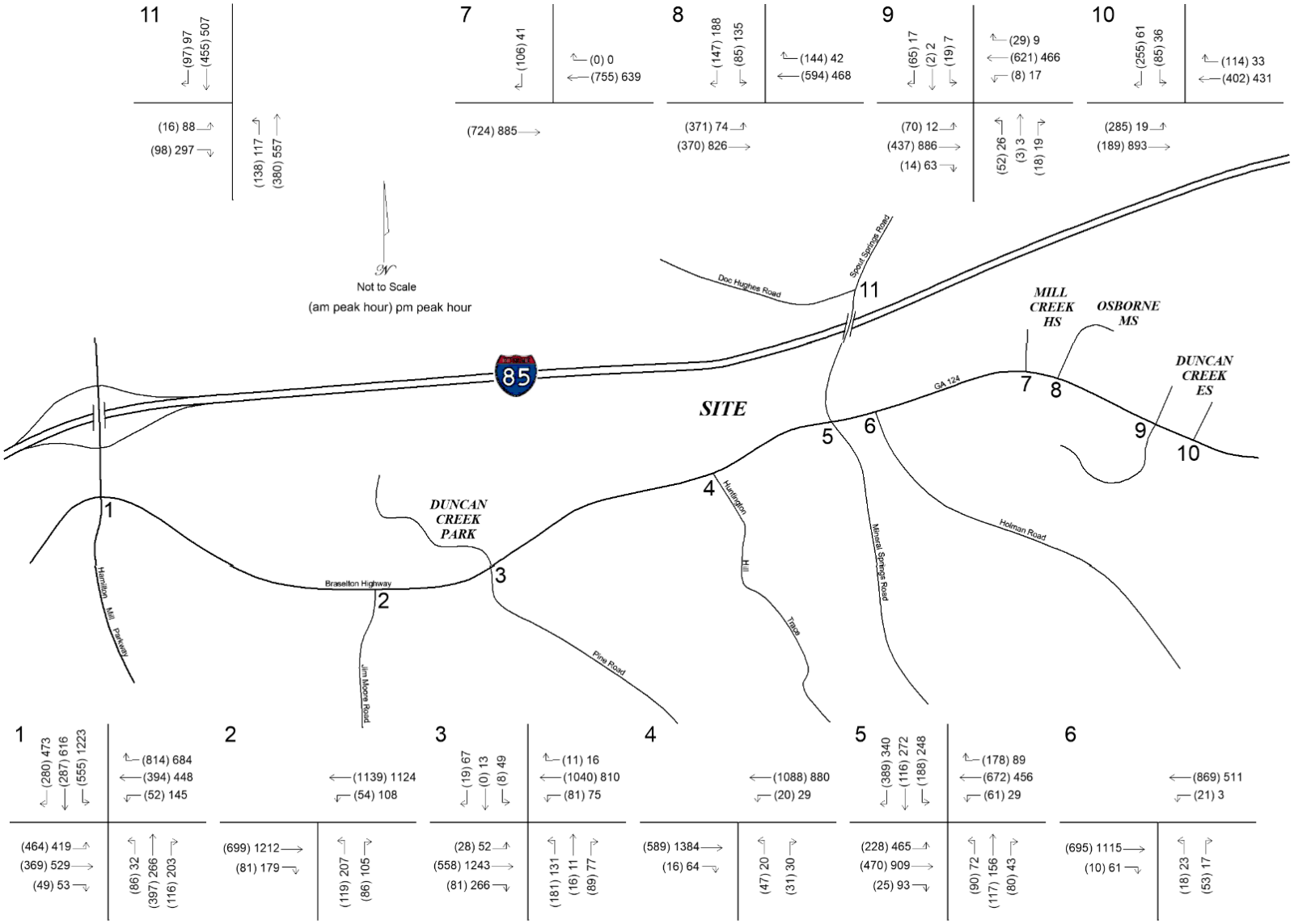

Figure 7 – No-Build A.M. and P.M. Peak Hour Volumes

6.3 No-Build Intersection Operations

Each study intersection was evaluated for the 2025 no-build condition. The no-build levels of service at each intersection are shown in Table 9. The Synchro computer printouts are found in Appendix D.

Table 9 – No-Build Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Braselton Highway / Hamilton Mill Road	D	51.4	*E*	*65.8*
northbound approach	D	48.7	*F*	*85.2*
southbound approach	D	50.0	*E*	*61.0*
eastbound approach	*E*	*72.4*	*F*	*89.1*
westbound approach	D	38.3	D	47.8
2. Braselton Highway / Jim Moore Road	B	13.9	B	11.9
northbound approach	B	16.1	C	33.5
eastbound approach	B	12.3	A	9.2
westbound approach	B	14.5	A	9.4
3. Braselton Highway / Pine Road / Duncan Creek Park	C	22.6	B	18.5
northbound approach	C	20.0	C	26.0
southbound approach	B	15.8	C	22.4
eastbound approach	C	20.7	B	18.8
westbound approach	C	24.8	B	15.5
4. Braselton Highway / Huntington Hill Trace (roundabout)	C	18.5	*E*	*49.3*
northbound approach	A	7.2	C	18.6
eastbound approach	A	8.2	*F*	*73.5*
westbound approach	D	25.7	B	13.6
5. Braselton Hwy / Spout Springs Rd / Mineral Springs Rd	C	29.9	D	39.2
northbound approach	C	32.1	D	36.8
southbound approach	C	30.4	D	40.5
eastbound approach	C	20.5	C	34.3
westbound approach	D	36.4	D	51.0
6. Braselton Highway / Holman Road	A	3.5	A	2.1
northbound approach	*F*	*50.9*	*F*	*69.5*
westbound left turn	A	9.5	B	12.0
7. Braselton Highway / Mill Creek HS RIRO	A	2.1	A	1.6
southbound approach	D	25.5	C	23.2

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8. Braselton Highway / Mill Creek HS Main Access	C	25.6	C	28.5
southbound approach	D	35.3	D	37.2
eastbound approach	B	19.4	C	25.2
westbound approach	C	27.2	C	21.4
9. Braselton Hwy / Duncan Creek ES West / Kings Cross Wy	A	7.5	A	3.0
northbound approach	*F*	*86.8*	*F*	*57.9*
southbound left turn	*E*	*43.1*	*F*	*55.5*
southbound right turn	C	15.0	B	11.7
eastbound left turn	A	9.4	A	8.5
westbound left turn	A	8.3	B	10.3
10. Braselton Highway / Duncan Creek ES East Access	B	13.7	A	2.5
southbound left turn	*F*	*93.5*	*E*	*49.7*
southbound right turn	C	18.2	B	12.7
eastbound left turn	A	9.8	A	8.7
11. Spout Springs Road / Doc Hughes Road	A	6.0	B	11.8
northbound approach	A	4.8	A	9.7
southbound approach	A	4.6	A	8.8
eastbound approach	B	16.0	B	19.3

6.4 No-Build Facilities Needs Analysis

The no-build analysis reveals that several locations will not meet the LOS D standard. A few of these locations were discussed in the existing condition. The locations that fail in the no-build condition are summarized in Table 10, with a discussion of mitigation at each location following.

Table 10 – No-Build Locations that Do Not Meet LOS D Standard

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Braselton Highway / Hamilton Mill Road			*E*	*65.8*
northbound approach			*F*	*85.2*
southbound approach			*E*	*61.0*
eastbound approach	*E*	*72.4*	*F*	*89.1*
4. Braselton Highway / Huntington Hill Trace (roundabout)			*E*	*49.3*
eastbound approach			*F*	*73.5*
6. Braselton Highway / Holman Road				
northbound approach	*F*	*50.9*	*F*	*69.5*
9. Braselton Hwy / Duncan Creek ES West / Kings Cross Wy				
northbound approach	*F*	*86.8*	*F*	*57.9*
southbound left turn	*E*	*43.1*	*F*	*55.5*
10. Braselton Highway / Duncan Creek ES East Access				
southbound left turn	*F*	*93.5*	*E*	*49.7*

Intersection 1 – Braselton Highway and Hamilton Mill Road / Hamilton Mill Parkway

This intersection overall will continue to operate at LOS D in the a.m. but will drop to LOS E in the p.m. peak hour. All approaches will fail the LOS D standard in the p.m. The discussion of possible mitigation for the existing analysis still applies.

Intersection 4 – Braselton Highway and Huntington Hill Trace

This intersection was modeled as a two lane per direction roundabout according to the programmed road design plans for this intersection. The roundabout will not meet the LOS D standard in the p.m. peak. Currently, GA 124 is uncontrolled at Huntington Hill Trace. With the roundabout, all vehicles on GA 124 must slow and yield. This new impedance introduces substantial delay to GA 124. A roundabout is an unusual choice of design for this intersection. Typically roundabouts are used when the volumes on the intersecting streets are somewhat balanced. Here, they are not and the volumes on Huntington Hill Trace are so low that they would not even

warrant signalization. As identified in the existing analysis, signalization would allow this intersection and all approaches to meet the LOS D standard. No westbound left turn lane would be required with four lanes on GA 124. Further discussion of the appropriate control at this intersection is provided in the analysis of future build conditions, when the proposed DRI will add a fourth approach as the main site access.

Intersections 6, 9, and 10 – Braselton Highway and Holman Road, Kings Cross Way, and Duncan Creek ES East Access

The failure at all three of these intersections in the no-build condition is comparable to the existing. The discussion in the existing analysis is still applicable for the no-build.

6.5 Summary of No-Build Mitigation

At the Hamilton Mill intersection, nothing additional or different was identified from the existing analysis. At Huntington Hill Trace, signalization would be preferable to the programmed roundabout. However, in the no-build, this intersection will continue to be a weak candidate for signalization. The remaining three intersections that do not meet the LOS D standard will continue to be weak candidates for signalization. The discussion in the existing analysis still applies.

7. Future (Build) Traffic Analysis

The analysis of the 2025 build scenario identifies the traffic impact of the proposed Braselton Spout Springs DRI. This future condition includes all traffic volumes and programmed improvements from the 2025 no-build scenario, plus the traffic that will be added by the Braselton Spout Springs project.

7.1 Build Lanes and Traffic Control

The only assumptions made for the build analysis are the lane configurations proposed in the Braselton Spout Springs DRI site plan at the project entrances. The full-movement access on GA 124 will align with Huntington Hill Trace. The project site plan originally anticipated a standard intersection with two inbound and two outbound lanes. However, in the build analysis, the control was assumed to be the programmed roundabout. The other three accesses are all designed as right-in/right-out (RIRO) with one inbound and one outbound lane at each. Each was modeled to include a deceleration lane on the major street and each will be side street stop sign controlled.

An Intersection Control Evaluation (ICE) was required at the three site accesses on GA 124. ICE Waivers are requested for the two RIRO accesses. At the full-movement access, the ICE concluded that a signal is the preferred method of control, outranking a roundabout and side street stop sign control. However, the ICE analysis included the assumption that a signal will be warranted. At the time of these studies a signal warrant analysis had not been performed since a roundabout has been programmed at this intersection. Given the conclusion of the ICE and the operational analysis results showing high delays on GA 124 with the roundabout, it is recommended that the option for signalization be explored further, including performing a signal warrant analysis according to the standards set forth in the Federal Highway Administration's *Manual on Uniform Control Devices* (MUTCD). The future lanes and method of control are presented in Figure 8. The ICE report is presented in Appendix F.

7.2 Build Traffic Volumes

The no-build volumes, shown previously in Figure 7, were combined with the site-generated trips, shown previously in Figure 3. This produces the 2025 build traffic volumes at each study intersection after the Braselton Spout Springs DRI is fully constructed and operational. These volumes are presented in Figure 9, and are also shown in the intersection volume worksheets in Appendix A.

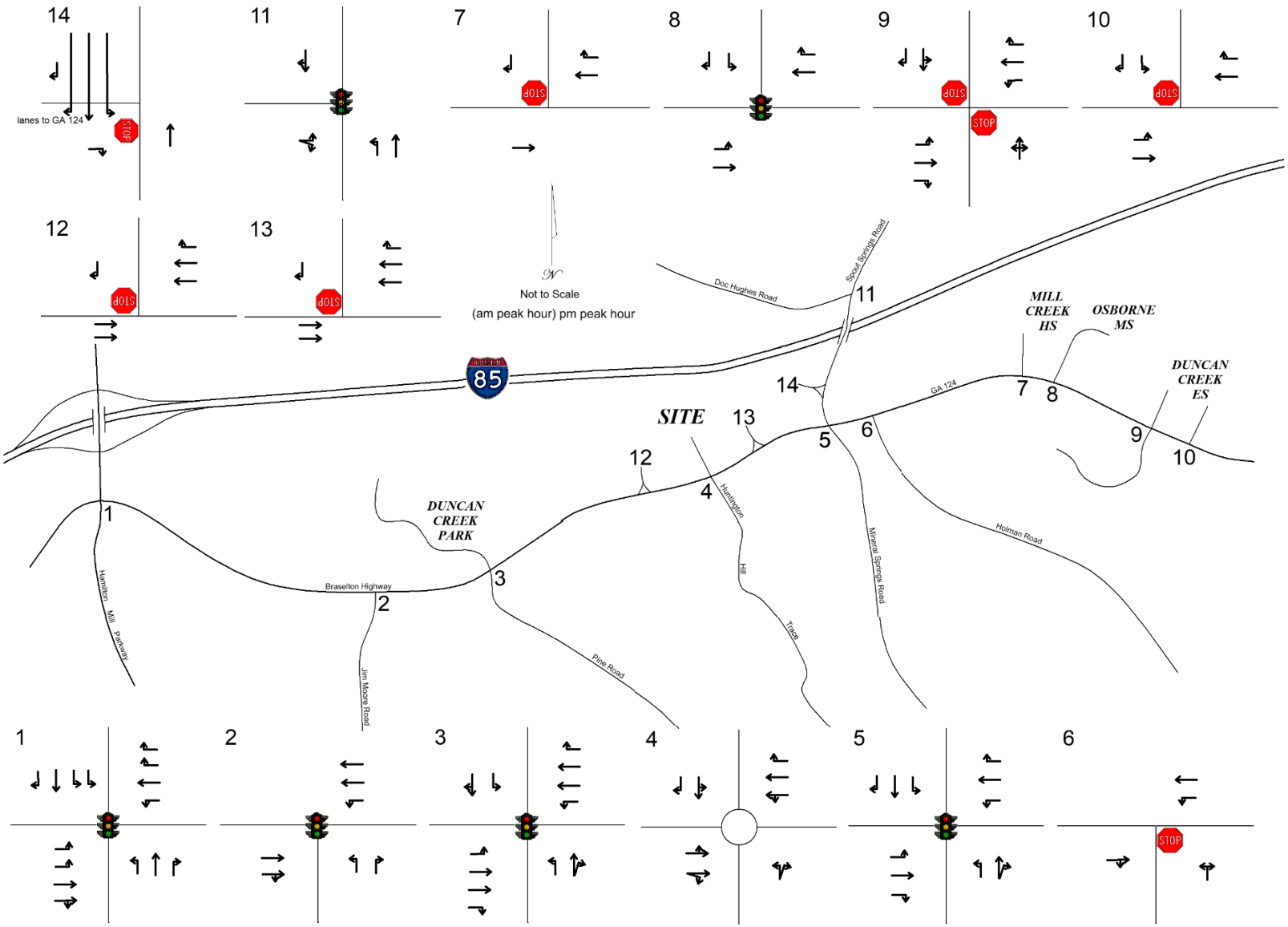

Figure 8 – Build Lane Configuration and Traffic Control

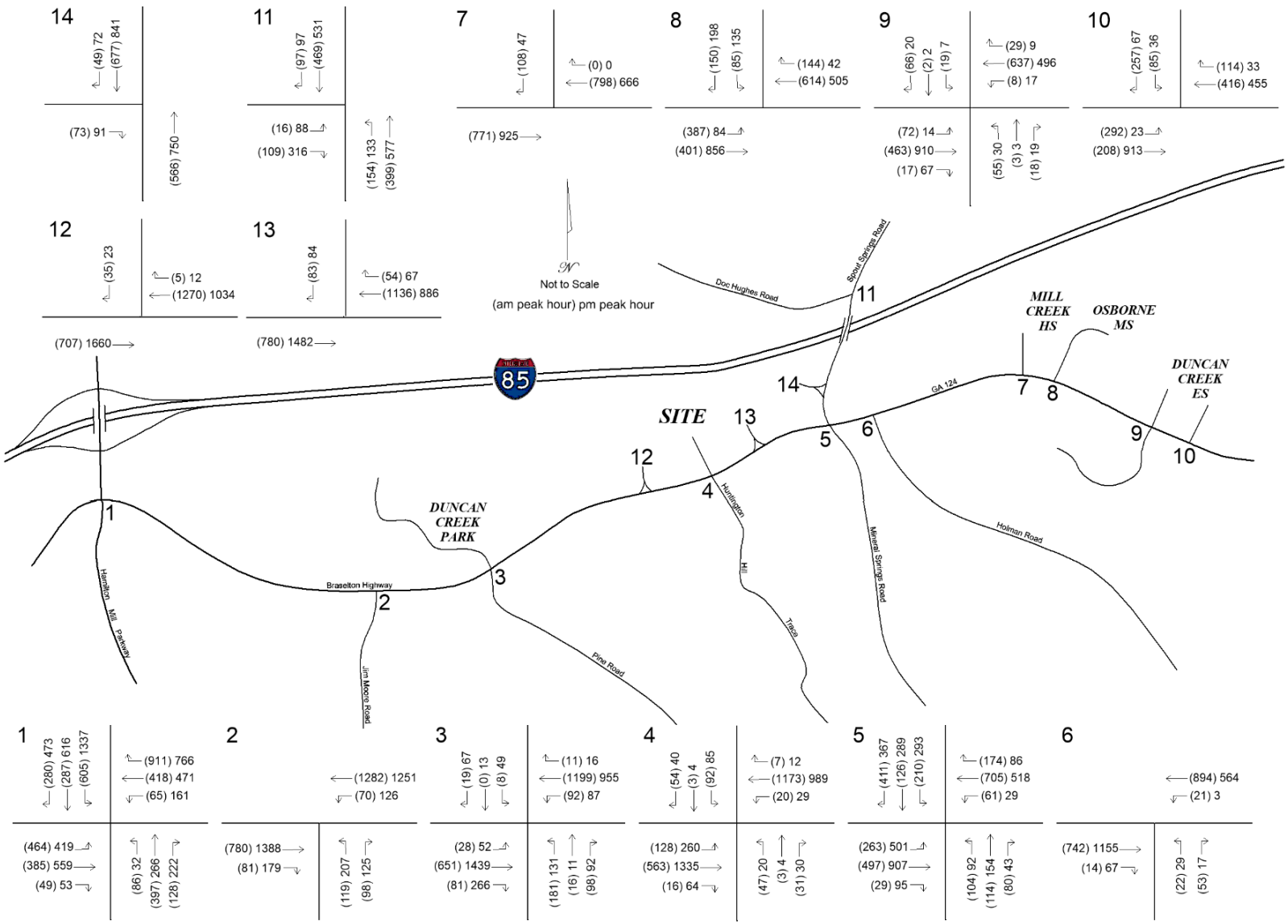

Figure 9 – Build A.M. and P.M. Peak Hour Volumes

7.3 Build Intersection Operations

Each study intersection was re-evaluated for the 2025 build condition. The build levels of service at each intersection are shown in Table 11. The Synchro computer printouts are located in Appendix E.

Table 11 – Build Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Braselton Highway / Hamilton Mill Road	D	53.0	***E***	***75.3***
northbound approach	***E***	***55.9***	***F***	***103.3***
southbound approach	D	51.3	***E***	***72.8***
eastbound approach	***E***	***73.9***	***F***	***96.3***
westbound approach	D	38.4	D	52.5
2. Braselton Highway / Jim Moore Road	B	13.0	B	12.3
northbound approach	B	19.8	D	45.7
eastbound approach	B	10.8	A	8.4
westbound approach	B	13.2	A	8.8
3. Braselton Highway / Pine Road / Duncan Creek Park	C	22.4	B	18.1
northbound approach	C	24.1	C	31.6
southbound approach	B	18.9	C	26.9
eastbound approach	B	19.1	B	17.9
westbound approach	C	24.2	B	14.0
4. Braselton Highway / Huntington Hill Trace / Site Access	***F***	***51.1***	***F***	***133.7***
northbound approach	A	9.5	D	31.1
southbound approach	B	12.7	B	10.1
eastbound approach	B	12.2	***F***	***191.2***
westbound approach	***F***	***85.0***	***F***	***66.9***
5. Braselton Hwy / Spout Springs Rd / Mineral Springs Rd	D	35.3	D	49.8
northbound approach	C	35.0	D	50.7
southbound approach	D	38.0	D	53.2
eastbound approach	C	25.7	D	50.2
westbound approach	D	42.5	D	45.4
6. Braselton Highway / Holman Road	A	5.8	A	3.6
northbound approach	***F***	***84.7***	***F***	***108.6***
westbound left turn	A	9.7	B	12.3
7. Braselton Highway / Mill Creek HS RIRO	A	2.2	A	2.0
southbound approach	D	28.6	D	26.9

continued on next page

8. Braselton Highway / Mill Creek HS Main Access	C	27.1	C	32.2
southbound approach	D	40.6	D	46.4
eastbound approach	B	20.0	C	26.5
westbound approach	C	28.0	C	22.1
9. Braselton Hwy / Duncan Creek ES West / Kings Cross Wy	A	9.1	A	3.8
northbound approach	*F*	*112.9*	*F*	*76.7*
southbound left turn	*E*	*47.0*	*F*	*62.7*
southbound right turn	C	15.3	B	12.1
eastbound left turn	A	9.5	A	8.6
westbound left turn	A	8.4	B	10.4
10. Braselton Highway / Duncan Creek ES East Access	C	15.1	A	2.7
southbound left turn	*F*	*114.5*	*F*	*56.5*
southbound right turn	C	18.8	B	13.2
eastbound left turn	A	10.0	A	8.8
11. Spout Springs Road / Doc Hughes Road	A	6.3	B	13.3
northbound approach	A	5.0	B	10.8
southbound approach	A	4.6	A	9.6
eastbound approach	B	17.3	C	22.4
12. Braselton Highway / Site West RIRO Access	A	0.3	A	0.1
southbound right turn	C	15.1	B	13.0
13. Braselton Highway / Site East RIRO Access	A	0.6	A	0.5
southbound right turn	C	15.2	B	13.2
14. Spout Springs Road / Site RIRO Access	A	0.9	A	1.1
eastbound right turn	C	15.2	C	20.7

7.4 Build Facilities Needs Analysis

The build analysis reveals that a few additional locations will not meet the LOS D standard. The locations that fail in the build condition are summarized in Table 12, with a discussion of mitigation at each location following.

Table 12 – Build Locations that Do Not Meet LOS D Standard

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Braselton Highway / Hamilton Mill Road			*E*	*75.3*
northbound approach	*E*	*55.9*	*F*	*103.3*
southbound approach			*E*	*72.8*
eastbound approach	*E*	*73.9*	*F*	*96.3*
4. Braselton Highway / Huntington Hill Trace / Site Access	*F*	*51.1*	*F*	*133.7*
eastbound approach			*F*	*191.2*
westbound approach	*F*	*85.0*	*F*	*66.9*
6. Braselton Highway / Holman Road				
northbound approach	*F*	*84.7*	*F*	*108.6*
9. Braselton Hwy / Duncan Creek ES West / Kings Cross Wy				
northbound approach	*F*	*112.9*	*F*	*76.7*
southbound left turn	*E*	*47.0*	*F*	*62.7*
10. Braselton Highway / Duncan Creek ES East Access				
southbound left turn	*F*	*114.5*	*F*	*56.5*

Intersection 1 – Braselton Highway and Hamilton Mill Road / Hamilton Mill Parkway

This intersection will continue to operate similarly in the build as in the no-build condition. One additional location will drop to LOS E – the northbound approach in the a.m. peak. The discussion of possible mitigation for the existing analysis still applies in the build and no additional mitigation is identified as necessitated by the proposed DRI.

Intersection 4 – Braselton Highway and Huntington Hill Trace

As a multi-lane roundabout, the same issue as identified in the no-build, will continue to the build. The side street approach exiting the site will operate acceptably, as will the Huntington Hill Trace approach, but the heavy through demand will cause the eastbound GA 124 approach to continue to fail in the p.m., comparably to the no-build, and the westbound approach will now fail as well. As identified in the existing and no-build analysis, signalization would allow this intersection and all approaches to meet the LOS D standard, and this will continue in the build condition, including the new fourth leg site access. With the proposed fourth leg, an eastbound left

turn lane should be provided on GA 124. A westbound left turn lane to serve Huntington Hill Trace would be beneficial and the site plan anticipates adding this lane to oppose the eastbound left turn lane if a roundabout is not constructed.

Intersections 6, 9, and 10 – Braselton Highway and Holman Road, Kings Cross Way, and Duncan Creek ES East Access

The failure at all three of these intersections in the build condition is comparable to the existing and no-build. The discussion in the existing analysis is still applicable for the no-build.

7.5 Summary of Build Mitigation

At the Hamilton Mill intersection, nothing additional or different was identified from the existing and no-build analysis. At Huntington Hill Trace, signalization would be preferable to the programmed roundabout. A signal warrant analysis should be performed to determine if this intersection will satisfy criteria for signalization. Eastbound and westbound left turn lanes and a westbound right turn lane should be added on GA 124 at this intersection if a roundabout is not constructed. The remaining three intersections that do not meet the LOS D standard will continue to be weak candidates for signalization. The discussion in the existing analysis still applies. The three RIRO site accesses will all operate acceptably. Each should be built with one entering and one exiting lane, with each exiting approach controlled by side street stop sign. A deceleration lane should be provided on the main road at each of these RIRO accesses.

8. Summary of Recommended Mitigation

The following is a summary of the mitigation recommended in this study.

8.1 Summary of Existing Mitigation

No mitigation was definitively recommended in the existing condition. At the Hamilton Mill intersection, the identified mitigation of the southbound third exclusive left turn lane is considered not feasible and it was advised that 1) the overall intersection operates reasonably well and 2) larger-scope improvements will be necessary as volumes grow. At Huntington Hill Trace a change in control was identified and signalization coupled with a westbound left turn lane were identified to meet the LOS D standard. However, it was noted that a roundabout is programmed for this intersection, and this was discussed in the no-build analysis. The remaining three intersections that do not meet the LOS D standard were identified as weak candidates for signalization. Police control was noted as a possible form of mitigation at the Duncan Creek ES accesses, and it is noted that such control may already be in effect when schools are operational. No mitigation is required in the existing condition at the intersections of GA 124 at Jim Moore Road, Pine Road, Spout Springs/Mineral Springs Roads, and the Mill Creek HS/Osborne MS accesses, or at the Spout Springs Road / Doc Hughes Road intersection.

8.2 Summary of No-Build Mitigation

At the Hamilton Mill intersection, nothing additional or different was identified from the existing analysis. At Huntington Hill Trace, signalization would be preferable to the programmed roundabout. However, in the no-build, this intersection will continue to be a weak candidate for signalization. The remaining three intersections that do not meet the LOS D standard will continue to be weak candidates for signalization. The discussion in the existing analysis still applies. No no-build condition mitigation is required at the intersections of GA 124 at Jim Moore Road, Pine Road, Spout Springs/Mineral Springs Roads, and the Mill Creek HS/Osborne MS accesses, or at the Spout Springs Road / Doc Hughes Road intersection.

8.2 Summary of Build Mitigation

At the Hamilton Mill intersection, nothing additional or different was identified from the existing and no-build analysis. At Huntington Hill Trace, signalization would be preferable to the programmed roundabout. A signal warrant analysis should be performed to determine if this intersection will satisfy criteria for signalization. Eastbound and westbound left turn lanes and a westbound right turn lane should be added on GA 124 at this intersection if a roundabout is not constructed. The remaining three intersections that do not meet the LOS D standard will continue to be weak candidates for signalization. The discussion in the existing analysis still applies. No mitigation is required in the build condition at the intersections of GA 124 at Jim Moore Road, Pine Road, Spout Springs/Mineral Springs Roads, and the Mill Creek HS/Osborne MS accesses, or at the Spout Springs Road /

Doc Hughes Road intersection. The three RIRO site accesses will all operate acceptably. Each should be built with one entering and one exiting lane, with each exiting approach controlled by side street stop sign. A deceleration lane should be provided on the main road at each of these RIRO accesses.

9. Site Internal Circulation and Connectivity

The main access to the Braselton Spout Springs DRI will be at GA 124 across from Huntington Hill Trace. This will be the only full movement access to the project. Circulation through the site will be affected by this configuration, with all vehicles wishing to travel to the east on GA 124, and to the north on Spout Springs Road, required to exit there. All vehicles entering from the east will have to turn left into the site at this one access.

The site layout has the residential uses located in the western portion of the site and all the commercial uses concentrated to the east. The commercial uses are separated from the full-movement access by residential uses. This will result in significant circulation by commercial trips through the residential portion of the site. The internal roadways are designed to accommodate this circulation with a broad four lane boulevard running north/south through the center of the site to a central roundabout. An east/west public street runs through the center of the site, intersecting with the roundabout and providing a connection to the commercial portion of the site and the site access on Spout Springs Road.

There would be some benefit to allowing full movements at the access on Spout Springs Road, though the potential disadvantages somewhat offset the benefits. The benefit for entering left turns from northbound Spout Springs Road is low – trips from the east along GA 124 will continue westbound through the Spout Springs intersection and turn right at the preferred one of the three available accesses on GA 124. The only trips that would desire to turn left into the Spout Springs access would be trips traveling northbound on Mineral Springs Road. These volumes are relatively low and can easily turn left at the signal onto GA 124 then into the site. The greater advantage is for exiting left turners wishing to travel to the north on Spout Springs. Without the ability to turn left directly onto Spout Springs, these trips will use the full movement access at Huntington Hill Trace. Vehicles from the commercial tracts will circulate westbound through the site, turn left from the full-movement access, then travel back eastbound and turn left again to travel northbound past the site access on Spout Springs. Eliminating that circuitous movement would reduce impacts at the full-movement access and the GA 124 / Spout Springs intersection. Should full movement be allowed at the Spout Springs access, that access should be relocated further to the north, away from conflicts with the southbound turn lanes on Spout Springs at the signal at GA 124. However, clear lines of sight should be ensured to/from the north and the bridge over Interstate 85.

Sidewalks are provided along both sides of the residential streets, with connectivity to the sidewalk proposed along the site frontage. It appears that there is a missing segment of sidewalk just north of GA 124 on the west side of Spout Springs Road, and it is recommended that connectivity be provided there. Sidewalks or paths should provide a connection between the residential and commercial portions of the site and between commercial uses.

No bicycle lanes exist in the study area and none are proposed within the Braselton Spout Springs DRI site. However, due to the mix of land uses in the area, and in order to encourage and facilitate this mode of travel, bicycle racks could be installed at the entrances to the retail shopping, restaurants, and near any offices.

10. Compliance with GRTA Criteria

This section addresses the compliance of Braselton Spout Springs DRI #3077 with the five criteria presented in Section 3-101 – General Criteria Applicable to All Proposed DRIs, and the three criteria presented in Section 3-103 – Criteria for GRTA DRI Non-Expedited Review, both found in *Procedures and Principles for GRTA Development of Regional Impact Review*, effective February 13, 2013.

10.1 General Criteria Applicable to All Proposed DRIs

A. Accessibility – The proposed DRI is designed to provide safe, quality, and convenient access and provides the flexibility of non-vehicular transportation options from the proposed development to existing or planned pedestrian, bicycle, or transit facilities such that there is a likelihood of significant use by residents, employees, and visitors to the proposed DRI.

   The Braselton Spout Springs DRI will be served by multiple vehicular accesses providing convenient vehicular access from both the east and west along GA 124 and from Spout Springs Road. Sidewalks will connect out to GA 124 and Spout Springs Road and sidewalks will be provided along the project roadway frontages. A walking trail is proposed at the west end of the site to connect to Duncan Creek Park via Rock Quarry Road. There are no bicycle lanes or regularly-scheduled public transit immediately adjacent to the site, but the site design allows for multiple options for efficient and flexible accessibility for vehicles and pedestrians.

B. Connectivity – The proposed DRI is likely to promote improved regional mobility in terms of new vehicular connections, on-site vehicular movements, and alternate routes that are likely to operate in a safe and efficient manner, increase the public roadway network, and avoid delays during peak periods.

   Vehicular connectivity directly to tracts to the north is limited by the presence of Interstate 85 and to the west by a creek. The site will provide internal connectivity between the commercial and residential tracts and multiple vehicular accesses will be provided to the adjacent streets. The site plan does not provide alternate routes, but the site accesses are all projected to operate efficiently and are expected to operate safely. The providing of amenities such as retail shops and restaurants will facilitate safety and efficiency by reducing the movements and vehicle miles traveled by neighbors to reach the goods and services and amenities they need, and currently travel further to obtain.

C. Access Management – The proposed DRI is designed so that vehicular ingress and egress to any on-site parking facilities and all access points to adjacent public roads are likely to operate in a safe and efficient manner and are not reasonably anticipated to result in peak hour ingress and egress congestion on adjacent roads and at nearby intersections, referred to as an Access Analysis.

The analysis of all site accesses reveals that acceptable operations are expected at all locations. Delays at the main full-movement access either will be minimal, should the proposed roundabout be constructed, or can be mitigated by signalization.

D. Regional Policies and Adopted Plans – The proposed DRI is likely to promote improved regional mobility because it is located in a center or corridor identified in the Regional Development Plan (RDP) designated by an RC; or the DRI has included in the proposed site plan components which will assist in the implementation of a transportation project currently in the Regional Transportation Plan (RTP) or Transportation Improvement Program (TIP), or other adopted regional plan designated by an RC.

The Braselton Spout Springs DRI is compatible with land use plans for this portion of Gwinnett County. While the project does not specifically assist in the implementation of any planned transportation project, it does not preclude any such improvements or plans. The project is designed anticipating the programmed widening of GA 124.

E. Local Standards Supporting Regional Policies – The proposed DRI is located within a local jurisdiction, or other jurisdictional agencies, with adopted codes that support regionally adopted policies, or the development codes and standards do not prohibit or impede the proposed DRI from meeting the GRTA DRI review criteria stated in Sections 3-101, 3-102, and 3-103.

The Braselton Spout Springs DRI is located in Gwinnett County. The County controls land development patterns and uses through a comprehensive code of zoning ordinances, a comprehensive land use plan, and a transportation plan. No applicable code or standard of the County has been identified through this transportation study that would impede or prohibit the Braselton Spout Springs DRI from meeting regional goals.

10.2 Criteria for GRTA DRI Non-Expedited Review

1. Vehicle Miles of Travel – The proposed DRI is likely to promote improved regional mobility and regional air quality by reducing vehicle miles of travel, and is designed to encourage the use of alternative transportation modes, or is located within an area with, or is proposing, a mixture of complimentary land uses. Offsite trip generation from the proposed DRI is reduced by at least fifteen percent (15%), or, in the event that a proposed DRI is unable to satisfy the trip reduction standard established in this subsection because of conditions which are beyond the control of the developer or the affected local government, the proposed DRI implements all available trip reduction techniques which are reasonably practical.

The project will be developed with a mix of land uses, a semi-grid of streets interconnecting the uses, and sidewalks with pedestrian-friendly character. The mix of uses will reduce vehicle miles of travel by

reducing the need for vehicular trips between compatible uses, when compared with similar levels of development built separately. The trip generation analysis revealed low multi-use trip reductions so the Vehicle Miles of Travel standard is not expected to be satisfied internally. However, this project will intercept trips that are already being made in the area, such as to retail shopping and restaurants, by providing these amenities closer to their trip origins. This will serve to reduce vehicle miles of travel in the study area. Additionally, some residents of the surrounding areas may be employed at the site, which would reduce existing trips from this general area to other employment centers.

2. Transportation and Traffic Analysis – The proposed DRI is reasonably anticipated to comply with planned or programmed improvements, maintain performance measures for preserving regional mobility, provide safe and efficient operations, and minimizes congestion when the proposed development or phase of development is complete. The quality of the proposed and existing infrastructure in the transportation network operates in a safe manner and adequately serves new trips generated by the proposed DRI in the build-out year. The proposed DRI identifies impacts on existing or programmed infrastructure, and proposes mitigation that is feasible and within the control of the applicant or appropriate agencies to implement.

The proposed DRI does not conflict with, or preclude, any planned or programmed improvements. This study identifies mitigation that will allow the infrastructure in the study network to operate in a safe and efficient manner. The mitigation identified in this report is feasible, and within the control of the applicant or appropriate agencies, with a few exceptions noted.

3. Relationship to Existing Development and Infrastructure – The proposed DRI is not located in any area where the existing level of development and availability of infrastructure is such that the proposed DRI is reasonably anticipated to result in unplanned and poorly served development which would not otherwise occur until well-planned growth and development and adequate public facilities are available.

The Braselton Spout Springs DRI represents well-planned growth and development, and provides vehicular and pedestrian connectivity to the adjacent subdivision to the south and pedestrian connectivity to land uses and a walking path and park to the west. This DRI does not preclude any well-planned development or infrastructure potential.

Appendix A

Traffic Count Data and Volume Worksheets

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 1. Braselton Highway (GA 124) and Hamilton Mill Road / Hamilton Mill Parkway

Weekday A.M. Peak Hour	**Northbound Hamilton Mill Parkway**				**Southbound Hamilton Mill Road**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Wednesday, March 16, 2016, 7:30-8:30)	72	328	101	501	460	240	234	934	384	312	41	737	44	328	667	1039
Growth to 2020	8.2%	8.2%	8.2%		8.2%	8.2%	8.2%		8.2%	8.2%	8.2%		8.2%	8.2%	8.2%	
2020 Volumes	**78**	**355**	**109**	**542**	**498**	**260**	**253**	**1011**	**415**	**338**	**44**	**797**	**48**	**355**	**722**	**1124**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0	0	6	0	0	6	0	1	0	1	0	6	20	26
Shifted Trips to Seckinger High School	0	5	-5	0	0	0	0	0	5	-5	0	0	-1	-4	-3	-8
No-Build Volumes	**86**	**397**	**116**	**598**	**555**	**287**	**280**	**1122**	**464**	**369**	**49**	**881**	**52**	**394**	**814**	**1259**
Braselton Highway DRU #3077 Commercial Trips	0	0	11	11	24	0	0	24	0	11	0	11	10	10	21	41
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	1	1	26	0	0	26	0	5	0	5	3	14	76	93
DRI Total	**0**	**0**	**12**	**12**	**50**	**0**	**0**	**50**	**0**	**16**	**0**	**16**	**13**	**24**	**97**	**134**
Build Volumes	**86**	**397**	**128**	**610**	**605**	**287**	**280**	**1172**	**464**	**385**	**49**	**897**	**65**	**418**	**911**	**1393**

Weekday P.M. Peak Hour	**Northbound Hamilton Mill Parkway**				**Southbound Hamilton Mill Road**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Wednesday, March 16, 2016, 5:30-6:30)	27	222	171	420	1003	516	396	1915	350	438	44	832	122	374	564	1060
Growth to 2020	8.2%	8.2%	8.2%		8.2%	8.2%	8.2%		8.2%	8.2%	8.2%		8.2%	8.2%	8.2%	
2020 Volumes	**29**	**240**	**185**	**454**	**1085**	**558**	**428**	**2072**	**379**	**474**	**48**	**900**	**132**	**405**	**610**	**1147**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0	0	25	0	0	25	0	7	0	7	0	5	13	18
Shifted Trips to Seckinger High School	0	1	-1	0	0	0	0	0	1	-1	0	0	-1	-4	-3	-8
No-Build Volumes	**32**	**266**	**203**	**502**	**1223**	**616**	**473**	**2313**	**419**	**529**	**53**	**1001**	**145**	**448**	**684**	**1276**
Braselton Highway DRU #3077 Commercial Trips	0	0	15	15	32	0	0	32	0	15	0	15	14	14	31	59
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	4	4	82	0	0	82	0	15	0	15	2	9	51	62
DRI Total	**0**	**0**	**19**	**19**	**114**	**0**	**0**	**114**	**0**	**30**	**0**	**30**	**16**	**23**	**82**	**121**
Build Volumes	**32**	**266**	**222**	**521**	**1337**	**616**	**473**	**2427**	**419**	**559**	**53**	**1031**	**161**	**471**	**766**	**1397**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 2. Braselton Highway (GA 124) and Jim Moore Road

Weekday A.M. Peak Hour	Northbound Jim Moore Road				Eastbound Braselton Highway			Westbound Braselton Highway		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thursday, February 7, 2019, 8:15-9:15)	101	81	182		621	72	693	51	990	1041
Growth to 2020	2.0%	2.0%			2.0%	2.0%		2.0%	2.0%	
2020 Volumes	**103**	**83**	**186**		**633**	**73**	**707**	**52**	**1010**	**1062**
Total Annual Background Growth	10.4%	10.4%			10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0		10	0	10	0	31	31
Shifted Trips to Seckinger High School	5	-5	0		-10	0	-10	-3	-7	-10
No-Build Volumes	**119**	**86**	**205**		**699**	**81**	**780**	**54**	**1139**	**1193**
Braselton Highway DRU #3077 Commercial Trips	0	10	10		46	0	46	9	41	50
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0		0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	2	2		35	0	35	7	102	109
DRI Total	**0**	**12**	**12**		**81**	**0**	**81**	**16**	**143**	**159**
Build Volumes	**119**	**98**	**217**		**780**	**81**	**861**	**70**	**1282**	**1352**

Weekday P.M. Peak Hour	Northbound Jim Moore Road				Eastbound Braselton Highway			Westbound Braselton Highway		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thursday, February 7, 2019, 4:00-5:00)	183	94	277		1044	159	1203	99	984	1083
Growth to 2020	2.0%	2.0%			2.0%	2.0%		2.0%	2.0%	
2020 Volumes	**187**	**96**	**283**		**1065**	**162**	**1227**	**101**	**1004**	**1105**
Total Annual Background Growth	10.4%	10.4%			10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0		38	0	38	0	23	23
Shifted Trips to Seckinger High School	1	-1	0		-2	0	-2	-3	-7	-10
No-Build Volumes	**207**	**105**	**312**		**1212**	**179**	**1391**	**108**	**1124**	**1233**
Braselton Highway DRU #3077 Commercial Trips	0	13	13		66	0	66	13	59	72
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0		0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	7	7		110	0	110	5	68	73
DRI Total	**0**	**20**	**20**		**176**	**0**	**176**	**18**	**127**	**145**
Build Volumes	**207**	**125**	**332**		**1388**	**179**	**1567**	**126**	**1251**	**1378**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 3. Braselton Highway (GA 124) and Pine Road / Duncan Creek Park

Weekday A.M. Peak Hour	**Northbound Pine Road**				**Southbound Duncan Creek Park Access**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Wednesday, December 17, 2017, 8:15-9:15)	150	14	80	244	7	0	16	23	24	481	69	574	72	870	9	951
Growth to 2020	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2020 Volumes	**159**	**15**	**85**	**259**	**7**	**0**	**17**	**24**	**25**	**510**	**73**	**609**	**76**	**923**	**10**	**1009**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0	0	0	0	0	0	0	10	0	10	0	31	0	31
Shifted Trips to Seckinger High School	5	0	-5	0	0	0	0	0	0	-15	0	-15	-3	-10	0	-13
No-Build Volumes	**181**	**16**	**89**	**286**	**8**	**0**	**19**	**27**	**28**	**558**	**81**	**667**	**81**	**1040**	**11**	**1132**
Braselton Highway DRU #3077 Commercial Trips	0	0	7	7	0	0	0	0	0	56	0	56	6	50	0	56
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	2	2	0	0	0	0	0	37	0	37	5	109	0	114
DRI Total	**0**	**0**	**9**	**9**	**0**	**0**	**0**	**0**	**0**	**93**	**0**	**93**	**11**	**159**	**0**	**170**
Build Volumes	**181**	**16**	**98**	**295**	**8**	**0**	**19**	**27**	**28**	**651**	**81**	**760**	**92**	**1199**	**11**	**1302**

Weekday P.M. Peak Hour	**Northbound Pine Road**				**Southbound Duncan Creek Park Access**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Wednesday, December 17, 2017, 5:00-6:00)	111	9	67	187	42	11	57	110	44	1031	227	1302	67	680	14	761
Growth to 2020	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2020 Volumes	**118**	**10**	**71**	**198**	**45**	**12**	**60**	**117**	**47**	**1094**	**241**	**1381**	**71**	**721**	**15**	**807**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0	0	0	0	0	0	0	38	0	38	0	23	0	23
Shifted Trips to Seckinger High School	1	0	-1	0	0	0	0	0	0	-3	0	-3	-3	-10	0	-13
No-Build Volumes	**131**	**11**	**77**	**219**	**49**	**13**	**67**	**129**	**52**	**1243**	**266**	**1560**	**75**	**810**	**16**	**901**
Braselton Highway DRU #3077 Commercial Trips	0	0	9	9	0	0	0	0	0	79	0	79	9	72	0	81
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	6	6	0	0	0	0	0	117	0	117	3	73	0	76
DRI Total	**0**	**0**	**15**	**15**	**0**	**0**	**0**	**0**	**0**	**196**	**0**	**196**	**12**	**145**	**0**	**157**
Build Volumes	**131**	**11**	**92**	**234**	**49**	**13**	**67**	**129**	**52**	**1439**	**266**	**1756**	**87**	**955**	**16**	**1058**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 4. Braselton Highway (GA 124) and Huntington Hill Trace / Site Access

Weekday A.M. Peak Hour	**Northbound Huntington Hill Trace**				**Southbound Site Access**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, March 13, 2018, 8:15-9:15)	41		27	68						522	14	536	17	932		949
Growth to 2020	4.0%		4.0%							4.0%	4.0%		4.0%	4.0%		
2020 Volumes	**43**		**28**	**71**						**543**	**15**	**557**	**18**	**969**		**987**
Total Annual Background Growth	10.4%		10.4%							10.4%	10.4%		10.4%	10.4%		
Braselton Highway at Holman Road Subdivision	0		0	0						10	0	10	0	31		31
Shifted Trips to Seckinger High School	0		0	0						-20	0	-20	0	-13		-13
No-Build Volumes	**47**		**31**	**78**						**589**	**16**	**605**	**20**	**1088**		**1108**
Braselton Highway DRU #3077 Commercial Trips	0	3	0	3	19	3	6	28	63	0	0	63	0	50	0	50
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	22	0	3	25	26	-26	0	0	0	-4	4	0
Braselton Highway DRU #3077 Residential Trips	0	0	0	0	51	0	45	96	39	0	0	39	0	39	3	42
DRI Total	**0**	**3**	**0**	**3**	**92**	**3**	**54**	**149**	**128**	**-26**	**0**	**102**	**0**	**85**	**7**	**92**
Build Volumes	**47**	**3**	**31**	**81**	**92**	**3**	**54**	**149**	**128**	**563**	**16**	**707**	**20**	**1173**	**7**	**1200**

Weekday P.M. Peak Hour	**Northbound Huntington Hill Trace**				**Southbound Site Access**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, March 13, 2018, 5:00-6:00)	17		26	43						1176	56	1232	25	758		783
Growth to 2020	4.0%		4.0%							4.0%	4.0%		4.0%	4.0%		
2020 Volumes	**18**		**27**	**45**						**1223**	**58**	**1281**	**26**	**788**		**814**
Total Annual Background Growth	10.4%		10.4%							10.4%	10.4%		10.4%	10.4%		
Braselton Highway at Holman Road Subdivision	0		0	0						38	0	38	0	23		23
Shifted Trips to Seckinger High School	0		0	0						-4	0	-4	0	-13		-13
No-Build Volumes	**20**		**30**	**49**						**1384**	**64**	**1449**	**29**	**880**		**909**
Braselton Highway DRU #3077 Commercial Trips	0	4	0	4	28	4	8	40	88	0	0	88	0	73	0	73
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	24	0	2	26	49	-49	0	0	0	-4	4	0
Braselton Highway DRU #3077 Residential Trips	0	0	0	0	33	0	30	63	123	0	0	123	0	40	8	48
DRI Total	**0**	**4**	**0**	**4**	**85**	**4**	**40**	**129**	**260**	**-49**	**0**	**211**	**0**	**109**	**12**	**121**
Build Volumes	**20**	**4**	**30**	**53**	**85**	**4**	**40**	**129**	**260**	**1335**	**64**	**1660**	**29**	**989**	**12**	**1030**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 5. Braselton Highway (GA 124) and Spout Springs Road / Mineral Springs Road

Weekday A.M. Peak Hour	**Northbound Mineral Springs Road**				**Southbound Spout Springs Road**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 8:00-9:00)	78	102	76	256	176	101	339	616	199	435	22	656	54	592	157	803
Growth to 2020	4.0%	4.0%	0.0%		0.0%	4.0%	4.0%		4.0%	0.0%	4.0%		0.0%	0.0%	0.0%	
2020 Volumes	**81**	**106**	**76**	**263**	**176**	**105**	**353**	**634**	**207**	**435**	**23**	**665**	**54**	**592**	**157**	**803**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	2	2	4	0	0	4	0	10	0	10	6	31	13	50
Shifted Trips to Seckinger High School	0	0	-6	-6	-10	0	0	-10	0	-20	0	-20	-5	-13	-8	-26
No-Build Volumes	**90**	**117**	**80**	**287**	**188**	**116**	**389**	**693**	**228**	**470**	**25**	**724**	**61**	**672**	**178**	**911**
Braselton Highway DRU #3077 Commercial Trips	9	0	0	9	13	8	17	38	16	3	0	19	0	17	0	17
Braselton Highway DRU #3077 Commercial Pass-by Trips	3	-3	0	0	2	1	5	8	0	-4	0	-4	0	4	-4	0
Braselton Highway DRU #3077 Residential Trips	2	0	0	2	7	1	0	8	19	28	4	51	0	12	0	12
DRI Total	**14**	**-3**	**0**	**11**	**22**	**10**	**22**	**54**	**35**	**27**	**4**	**66**	**0**	**33**	**-4**	**29**
Build Volumes	**104**	**114**	**80**	**298**	**210**	**126**	**411**	**747**	**263**	**497**	**29**	**790**	**61**	**705**	**174**	**940**

Weekday P.M. Peak Hour	**Northbound Mineral Springs Road**				**Southbound Spout Springs Road**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 5:00-6:00)	63	136	34	233	213	237	296	746	405	793	81	1279	26	404	78	508
Growth to 2020	4.0%	4.0%	0.0%		0.0%	4.0%	4.0%		4.0%	0.0%	4.0%		0.0%	0.0%	0.0%	
2020 Volumes	**66**	**141**	**34**	**241**	**213**	**246**	**308**	**767**	**421**	**793**	**84**	**1298**	**26**	**404**	**78**	**508**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	6	6	15	0	0	15	0	38	0	38	4	23	9	36
Shifted Trips to Seckinger High School	0	0	-1	-1	-2	0	0	-2	0	-4	0	-4	-4	-13	-6	-23
No-Build Volumes	**72**	**156**	**43**	**271**	**248**	**272**	**340**	**860**	**465**	**909**	**93**	**1467**	**29**	**456**	**89**	**574**
Braselton Highway DRU #3077 Commercial Trips	12	0	0	12	18	11	24	53	23	5	0	28	0	23	0	23
Braselton Highway DRU #3077 Commercial Pass-by Trips	2	-2	0	0	22	5	3	30	0	-25	0	-25	0	3	-3	0
Braselton Highway DRU #3077 Residential Trips	6	0	0	6	5	1	0	6	13	18	2	33	0	36	0	36
DRI Total	**20**	**-2**	**0**	**18**	**45**	**17**	**27**	**89**	**36**	**-2**	**2**	**36**	**0**	**62**	**-3**	**59**
Build Volumes	**92**	**154**	**43**	**289**	**293**	**289**	**367**	**949**	**501**	**907**	**95**	**1503**	**29**	**518**	**86**	**633**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 6. Braselton Highway (GA 124) and Holman Road

Weekday A.M. Peak Hour	**Northbound Holman Road**				**Eastbound Braselton Highway**			**Westbound Braselton Highway**		
	L	**R**	**Tot**		**T**	**R**	**Tot**	**L**	**T**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 8:00-9:00)	16	48	64		648	9	657	19	765	784
Growth to 2020	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	
2020 Volumes	**16**	**48**	**64**		**648**	**9**	**657**	**19**	**765**	**784**
Total Annual Background Growth	10.4%	10.4%			10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0		16	0	16	0	50	50
Shifted Trips to Seckinger High School	0	0	0		-36	0	-36	0	-26	-26
No-Build Volumes	**18**	**53**	**71**		**695**	**10**	**705**	**21**	**869**	**890**
Braselton Highway DRU #3077 Commercial Trips	4	0	4		12	4	16	0	13	13
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0		0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	0		35	0	35	0	12	12
DRI Total	**4**	**0**	**4**		**47**	**4**	**51**	**0**	**25**	**25**
Build Volumes	**22**	**53**	**75**		**742**	**14**	**756**	**21**	**894**	**915**

Weekday P.M. Peak Hour	**Northbound Holman Road**				**Eastbound Braselton Highway**			**Westbound Braselton Highway**		
	L	**R**	**Tot**		**T**	**R**	**Tot**	**L**	**T**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 5:00-6:00)	21	15	36		963	55	1018	3	451	454
Growth to 2020	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	
2020 Volumes	**21**	**15**	**36**		**963**	**55**	**1018**	**3**	**451**	**454**
Total Annual Background Growth	10.4%	10.4%			10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0		59	0	59	0	36	36
Shifted Trips to Seckinger High School	0	0	0		-7	0	-7	0	-23	-23
No-Build Volumes	**23**	**17**	**40**		**1115**	**61**	**1176**	**3**	**511**	**514**
Braselton Highway DRU #3077 Commercial Trips	6	0	6		17	6	23	0	17	17
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0		0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	0		23	0	23	0	36	36
DRI Total	**6**	**0**	**6**		**40**	**6**	**46**	**0**	**53**	**53**
Build Volumes	**29**	**17**	**46**		**1155**	**67**	**1222**	**3**	**564**	**567**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 7. Braselton Highway (GA 124) and Mill Creek High School Right-In/Right-Out Access

Weekday A.M. Peak Hour		**Southbound Mill Creek HS RIRO**		**Eastbound Braselton Highway**		**Westbound Braselton Highway**		
		R	**Tot**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 8:00-9:00)		105	105	670	670	692	0	692
Growth to 2020		0.0%		0.0%		0.0%	0.0%	
2020 Volumes		**105**	**105**	**670**	**670**	**692**	**0**	**692**
Total Annual Background Growth		10.4%		10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision		1	1	20	20	6	0	6
Shifted Trips to Seckinger High School		-11	-11	-36	-36	-15	0	-15
No-Build Volumes		**106**	**106**	**724**	**724**	**755**	**0**	**755**
Braselton Highway DRU #3077 Commercial Trips		0	0	12	12	13	0	13
Braselton Highway DRU #3077 Commercial Pass-by Trips		0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips		2	2	35	35	30	0	30
DRI Total		**2**	**2**	**47**	**47**	**43**	**0**	**43**
Build Volumes		**108**	**108**	**771**	**771**	**798**	**0**	**798**

Weekday P.M. Peak Hour		**Southbound Mill Creek HS RIRO**		**Eastbound Braselton Highway**		**Westbound Braselton Highway**		
		R	**Tot**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 4:00-5:00)		39	39	799	799	581	0	581
Growth to 2020		0.0%		0.0%		0.0%	0.0%	
2020 Volumes		**39**	**39**	**799**	**799**	**581**	**0**	**581**
Total Annual Background Growth		10.4%		10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision		2	2	10	10	17	0	17
Shifted Trips to Seckinger High School		-4	-4	-7	-7	-19	0	-19
No-Build Volumes		**41**	**-4**	**885**	**885**	**639**	**0**	**639**
Braselton Highway DRU #3077 Commercial Trips		0	0	17	17	17	0	17
Braselton Highway DRU #3077 Commercial Pass-by Trips		0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips		6	6	23	23	10	0	10
DRI Total		**6**	**6**	**40**	**40**	**27**	**0**	**27**
Build Volumes		**47**	**2**	**925**	**925**	**666**	**0**	**666**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 8. Braselton Highway (GA 124) and Mill Creek High School and Frank N Osborne Middle School Main Access

Weekday A.M. Peak Hour		**Southbound Mill Creek/Osborne**			**Eastbound Braselton Highway**			**Westbound Braselton Highway**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 8:00-9:00)		84	145	229	360	326	686	535	143	678
Growth to 2020		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
2020 Volumes		**84**	**145**	**229**	**360**	**326**	**686**	**535**	**143**	**678**
Total Annual Background Growth		10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision		0	2	2	10	10	20	3	0	3
Shifted Trips to Seckinger High School		-8	-15	-23	-36	0	-36	0	-14	-14
No-Build Volumes		**85**	**147**	**232**	**371**	**370**	**741**	**594**	**144**	**738**
Braselton Highway DRU #3077 Commercial Trips		0	0	0	0	12	12	13	0	13
Braselton Highway DRU #3077 Commercial Pass-by Trips		0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips		0	3	3	16	19	35	7	0	7
DRI Total		**0**	**3**	**3**	**16**	**31**	**47**	**20**	**0**	**20**
Build Volumes		**85**	**150**	**235**	**387**	**401**	**788**	**614**	**144**	**758**

Weekday P.M. Peak Hour		**Southbound Mill Creek/Osborne**			**Eastbound Braselton Highway**			**Westbound Braselton Highway**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 4:00-5:00)		134	186	320	72	741	813	412	42	454
Growth to 2020		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
2020 Volumes		**134**	**186**	**320**	**72**	**741**	**813**	**412**	**42**	**454**
Total Annual Background Growth		10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision		0	2	2	2	8	10	13	0	13
Shifted Trips to Seckinger High School		-13	-19	-32	-7	0	-7	0	-4	-4
No-Build Volumes		**135**	**188**	**323**	**74**	**826**	**901**	**468**	**42**	**510**
Braselton Highway DRU #3077 Commercial Trips		0	0	0	0	17	17	17	0	17
Braselton Highway DRU #3077 Commercial Pass-by Trips		0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips		0	10	10	10	13	23	20	0	20
DRI Total		**0**	**10**	**10**	**10**	**30**	**40**	**37**	**0**	**37**
Build Volumes		**135**	**198**	**333**	**84**	**856**	**941**	**505**	**42**	**547**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 9. Braselton Highway (GA 124) and Duncan Creek Elementary School West Access / Kings Cross Way

Weekday A.M. Peak Hour	**Northbound Kings Cross Way**				**Southbound Duncan Creek ES**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018 at Mill Creek, side streets calculated)	47	3	16	66	17	2	58	77	62	396	13	471	7	573	26	606
Growth to 2020	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
2020 Volumes	**47**	**3**	**16**	**66**	**17**	**2**	**58**	**77**	**62**	**396**	**13**	**471**	**7**	**573**	**26**	**606**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0	0	0	0	1	1	2	8	0	10	0	2	0	2
Shifted Trips to Seckinger High School	0	0	0	0	0	0	0	0	0	-8	0	-8	0	-14	0	-14
No-Build Volumes	**52**	**3**	**18**	**73**	**19**	**2**	**65**	**86**	**70**	**437**	**14**	**522**	**8**	**621**	**29**	**657**
Braselton Highway DRU #3077 Commercial Trips	3	0	0	3	0	0	0	0	0	9	3	12	0	10	0	10
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	0	0	0	0	1	1	2	17	0	19	0	6	0	6
DRI Total	**3**	**0**	**0**	**3**	**0**	**0**	**1**	**1**	**2**	**26**	**3**	**31**	**0**	**16**	**0**	**16**
Build Volumes	**55**	**3**	**18**	**76**	**19**	**2**	**66**	**87**	**72**	**463**	**17**	**553**	**8**	**637**	**29**	**673**

Weekday P.M. Peak Hour	**Northbound Kings Cross Way**				**Southbound Duncan Creek ES**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018 at Mill Creek, side streets calculated)	24	3	17	44	6	2	14	22	9	809	57	875	15	416	8	439
Growth to 2020	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
2020 Volumes	**24**	**3**	**17**	**44**	**6**	**2**	**14**	**22**	**9**	**809**	**57**	**875**	**15**	**416**	**8**	**439**
Total Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	0	0	0	0	0	2	2	2	6	0	8	0	11	0	11
Shifted Trips to Seckinger High School	0	0	0	0	0	0	0	0	0	-13	0	-13	0	-4	0	-4
No-Build Volumes	**26**	**3**	**19**	**49**	**7**	**2**	**17**	**26**	**12**	**886**	**63**	**961**	**17**	**466**	**9**	**492**
Braselton Highway DRU #3077 Commercial Trips	4	0	0	4	0	0	0	0	0	13	4	17	0	13	0	13
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	0	0	0	0	0	0	3	3	2	11	0	13	0	17	0	17
DRI Total	**4**	**0**	**0**	**4**	**0**	**0**	**3**	**3**	**2**	**24**	**4**	**30**	**0**	**30**	**0**	**30**
Build Volumes	**30**	**3**	**19**	**53**	**7**	**2**	**20**	**29**	**14**	**910**	**67**	**991**	**17**	**496**	**9**	**522**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 10. Braselton Highway (GA 124) and Duncan Creek Elementary School East Access

Weekday A.M. Peak Hour		**Southbound Duncan Creek ES East**			**Eastbound Braselton Highway**			**Westbound Braselton Highway**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018 at Mill Creek, side streets calculated)		77	231	308	258	171	429	375	103	478
Growth to 2020		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
2020 Volumes		**77**	**231**	**308**	**258**	**171**	**429**	**375**	**103**	**478**
Total Annual Background Growth		10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision		0	0	0	0	8	8	2	0	2
Shifted Trips to Seckinger High School		0	0	0	0	-8	-8	-14	0	-14
No-Build Volumes		**85**	**255**	**340**	**285**	**189**	**474**	**402**	**114**	**516**
Braselton Highway DRU #3077 Commercial Trips		0	0	0	0	9	9	10	0	10
Braselton Highway DRU #3077 Commercial Pass-by Trips		0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips		0	2	2	7	10	17	4	0	4
DRI Total		**0**	**2**	**2**	**7**	**19**	**26**	**14**	**0**	**14**
Build Volumes		**85**	**257**	**342**	**292**	**208**	**500**	**416**	**114**	**530**

Weekday P.M. Peak Hour		**Southbound Duncan Creek ES East**			**Eastbound Braselton Highway**			**Westbound Braselton Highway**		
		L	**R**	**Tot**	**L**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018 at Mill Creek, side streets calculated)		33	55	88	17	815	832	384	30	414
Growth to 2020		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
2020 Volumes		**33**	**55**	**88**	**17**	**815**	**832**	**384**	**30**	**414**
Total Annual Background Growth		10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision		0	0	0	0	6	6	11	0	11
Shifted Trips to Seckinger High School		0	0	0	0	-13	-13	-4	0	-4
No-Build Volumes		**36**	**61**	**97**	**19**	**893**	**912**	**431**	**33**	**464**
Braselton Highway DRU #3077 Commercial Trips		0	0	0	0	13	13	13	0	13
Braselton Highway DRU #3077 Commercial Pass-by Trips		0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips		0	6	6	4	7	11	11	0	11
DRI Total		**0**	**6**	**6**	**4**	**20**	**24**	**24**	**0**	**24**
Build Volumes		**36**	**67**	**103**	**23**	**913**	**936**	**455**	**33**	**488**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 11. Spout Springs Road and Doc Hughes Road

Weekday A.M. Peak Hour	**Northbound Spout Springs Road**			**Southbound Spout Springs Road**			**Eastbound Doc Hughes Road**		
	L	**T**	**Tot**	**T**	**R**	**Tot**	**L**	**R**	**Tot**
Counted Volumes (Tuesday, September 20, 2016, 7:45-8:45)	117	312	429	385	81	466	13	83	96
Growth to 2020	8.2%	8.2%		8.2%	8.2%		8.2%	8.2%	
2020 Volumes	**127**	**338**	**464**	**417**	**88**	**504**	**14**	**90**	**104**
Total Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	13	13	3	0	3	0	1	1
Shifted Trips to Seckinger High School	-2	-6	-8	-8	0	-8	0	-2	-2
No-Build Volumes	**138**	**380**	**517**	**455**	**97**	**552**	**16**	**98**	**114**
Braselton Highway DRU #3077 Commercial Trips	7	9	16	10	0	10	0	8	8
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	9	10	19	4	0	4	0	3	3
DRI Total	**16**	**19**	**35**	**14**	**0**	**14**	**0**	**11**	**11**
Build Volumes	**154**	**399**	**552**	**469**	**97**	**566**	**16**	**109**	**125**

Weekday P.M. Peak Hour	**Northbound Spout Springs Road**			**Southbound Spout Springs Road**			**Eastbound Doc Hughes Road**		
	L	**T**	**Tot**	**T**	**R**	**Tot**	**L**	**R**	**Tot**
Counted Volumes (Tuesday, September 20, 2016, 5:00-6:00)	100	462	562	416	81	497	74	246	320
Growth to 2020	8.2%	8.2%		8.2%	8.2%		8.2%	8.2%	
2020 Volumes	**108**	**500**	**608**	**450**	**88**	**538**	**80**	**266**	**346**
Total Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
Braselton Highway at Holman Road Subdivision	0	9	9	11	0	11	0	4	4
Shifted Trips to Seckinger High School	-2	-4	-6	-1	0	-1	0	-1	-1
No-Build Volumes	**117**	**557**	**674**	**507**	**97**	**604**	**88**	**297**	**385**
Braselton Highway DRU #3077 Commercial Trips	10	13	23	13	0	13	0	10	10
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	0	0	0	0	0	0	0
Braselton Highway DRU #3077 Residential Trips	6	7	13	11	0	11	0	9	9
DRI Total	**16**	**20**	**36**	**24**	**0**	**24**	**0**	**19**	**19**
Build Volumes	**133**	**577**	**710**	**531**	**97**	**628**	**88**	**316**	**404**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 12. Braselton Highway (GA 124) and Site West Right-In / Right-Out Access

Weekday A.M. Peak Hour		**Southbound Site West RIRO Access**				**Eastbound Braselton Highway**			**Westbound Braselton Highway**			
		L	**T**	**R**	**Tot**	**L**	**T**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, March 13, 2018, 8:15-9:15)							536	536		973		973
Growth to 2020							4.0%			4.0%		
2020 Volumes							**557**	**557**		**1012**		**1012**
Total Annual Background Growth							10.4%			10.4%		
Braselton Highway at Holman Road Subdivision							10	10		31		31
Shifted Trips to Seckinger High School							-20	-20		-13		-13
No-Build Volumes							**605**	**605**		**1135**		**1135**
Braselton Highway DRU #3077 Commercial Trips				0	0		63	63		56	0	56
Braselton Highway DRU #3077 Commercial Pass-by Trips				0	0		0	0		0	0	0
Braselton Highway DRU #3077 Residential Trips				35	35		39	39		79	5	84
DRI Total				**35**	**35**		**102**	**102**		**135**	**5**	**140**
Build Volumes				**35**	**35**		**707**	**707**		**1270**	**5**	**1275**

Weekday P.M. Peak Hour		**Southbound Site West RIRO Access**				**Eastbound Braselton Highway**				**Westbound Braselton Highway**			
		L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, March 13, 2018, 5:00-6:00)							1232		1232		775		775
Growth to 2020							4.0%				4.0%		
2020 Volumes							**1281**		**1281**		**806**		**806**
Total Annual Background Growth							10.4%				10.4%		
Braselton Highway at Holman Road Subdivision							38		38		23		23
Shifted Trips to Seckinger High School							-4		-4		-13		-13
No-Build Volumes							**1449**		**1449**		**900**		**900**
Braselton Highway DRU #3077 Commercial Trips				0	0		88		88		81	0	81
Braselton Highway DRU #3077 Commercial Pass-by Trips				0	0		0		0		0	0	0
Braselton Highway DRU #3077 Residential Trips				23	23		123		123		53	17	70
DRI Total				**23**	**23**		**211**		**211**		**134**	**17**	**151**
Build Volumes				**23**	**23**		**1660**		**1660**		**1034**	**17**	**1051**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 13. Braselton Highway (GA 124) and Site East Right-In / Right-Out Access

Weekday A.M. Peak Hour		**Southbound Site East RIRO Access**		**Eastbound Braselton Highway**		**Westbound Braselton Highway**		
		R	**Tot**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 8:00-9:00)				656	656	1009		1009
Growth to 2020				0.0%		0.0%		
2020 Volumes				**656**	**656**	**1009**		**1009**
Total Annual Background Growth				10.4%		10.4%		
Braselton Highway at Holman Road Subdivision				10	10	31		31
Shifted Trips to Seckinger High School				-20	-20	-13		-13
No-Build Volumes				**714**	**714**	**1132**		**1132**
Braselton Highway DRU #3077 Commercial Trips		33	33	19	19	17	26	43
Braselton Highway DRU #3077 Commercial Pass-by Trips		16	16	-4	-4	-22	22	0
Braselton Highway DRU #3077 Residential Trips		34	34	51	51	9	6	15
DRI Total		**83**	**83**	**66**	**66**	**4**	**54**	**58**
Build Volumes		**83**	**83**	**780**	**780**	**1136**	**54**	**1190**

Weekday P.M. Peak Hour		**Southbound Site East RIRO Access**		**Eastbound Braselton Highway**		**Westbound Braselton Highway**		
		R	**Tot**	**T**	**Tot**	**T**	**R**	**Tot**
Counted Volumes (Tuesday, May 22, 2018, 5:00-6:00)				1279	1279	763		763
Growth to 2020				0.0%		0.0%		
2020 Volumes				**1279**	**1279**	**763**		**763**
Total Annual Background Growth				10.4%		10.4%		
Braselton Highway at Holman Road Subdivision				38	38	23		23
Shifted Trips to Seckinger High School				-4	-4	-13		-13
No-Build Volumes				**1446**	**1446**	**852**		**852**
Braselton Highway DRU #3077 Commercial Trips		49	49	28	28	24	35	59
Braselton Highway DRU #3077 Commercial Pass-by Trips		12	12	-25	-25	-15	15	0
Braselton Highway DRU #3077 Residential Trips		23	23	33	33	25	17	42
DRI Total		**84**	**84**	**36**	**36**	**34**	**67**	**101**
Build Volumes		**84**	**84**	**1482**	**1482**	**886**	**67**	**953**

Braselton Highway at Spout Springs Road DRI #3077 Transportation Analysis
Gwinnett County, Georgia

May 2020

Intersection: 14. Spout Springs Road and Site Right-In / Right-Out Access

Weekday A.M. Peak Hour	**Northbound Spout Springs Road**		**Southbound Spout Springs Road**			**Eastbound Site RIRO Access**		
	T	**Tot**	**T**	**R**	**Tot**	**R**	**Tot**	
Counted Volumes (Tuesday, May 22, 2018, 8:00-9:00)	458	458	616		616			
Growth to 2020	4.0%		4.0%					
2020 Volumes	**476**	**476**	**641**		**641**			
Total Annual Background Growth	10.4%		10.4%					
Braselton Highway at Holman Road Subdivision	13	13	4		4			
Shifted Trips to Seckinger High School	-8	-8	-10		-10			
No-Build Volumes	**531**	**531**	**701**		**701**			
Braselton Highway DRU #3077 Commercial Trips	16	16	0	18	18	38	38	
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	-24	24	0	27	27	
Braselton Highway DRU #3077 Residential Trips	19	19	0	7	7	8	8	
DRI Total	**35**	**35**	**-24**	**49**	**25**	**73**	**73**	
Build Volumes	**566**	**566**	**677**	**49**	**726**	**73**	**73**	

Weekday P.M. Peak Hour	**Northbound Spout Springs Road**		**Southbound Spout Springs Road**			**Eastbound Site RIRO Access**		
	T	**Tot**	**T**	**R**	**Tot**	**R**	**Tot**	
Counted Volumes (Tuesday, May 22, 2018, 5:00-6:00)	619	619	746		746			
Growth to 2020	4.0%		4.0%					
2020 Volumes	**644**	**644**	**776**		**776**			
Total Annual Background Growth	10.4%		10.4%					
Braselton Highway at Holman Road Subdivision	9	9	15		15			
Shifted Trips to Seckinger High School	-6	-6	-2		-2			
No-Build Volumes	**714**	**714**	**870**		**870**			
Braselton Highway DRU #3077 Commercial Trips	23	23	0	23	23	55	55	
Braselton Highway DRU #3077 Commercial Pass-by Trips	0	0	-29	29	0	30	30	
Braselton Highway DRU #3077 Residential Trips	13	13	0	20	20	6	6	
DRI Total	**36**	**36**	**-29**	**72**	**43**	**91**	**91**	
Build Volumes	**750**	**750**	**841**	**72**	**913**	**91**	**91**	

PEAK HOUR ITM SUMMARY

#005 Hamilton Mill Road & Braselton Highway (S.R. 124)

LOCATION#:	005	QTD PROJ#:	2016157	AM PEAK:	730 AM
NORTH / SOUTH:	Hamilton Mill Road	DATE:	Wednesday, March 16, 2016	MD PEAK:	
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA	PM PEAK:	530 PM

Hamilton Mill Road

SOUTHBOUND LANES

LN	1	1	2
AM	234	240	460
MD	0	0	0
PM	396	516	1003
TOTAL	630	756	1463

Braselton Highway (S.R. 124)

EASTBOUND LANES

LN	AM	MD	PM	TOTAL
2	384	0	350	734
2	312	0	438	750
1	41	0	44	85

SIGNALIZED

WESTBOUND LANES

TOTAL	PM	MD	AM	LN
1231	564	0	667	1
702	374	0	328	1
166	122	0	44	1

Braselton Highway (S.R. 124)

TOTAL	99	550	272
PM	27	222	171
MD	0	0	0
AM	72	328	101
LN	1	1	1

NORTHBOUND LANES

Hamilton Mill Road

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

AM COUNT	6:00 AM	TO	9:00 AM
MD COUNT	-	TO	-
PM COUNT	4:00 PM	TO	7:00 PM

VEHICLE TURNING MOVEMENT COUNT

#005 Hamilton Mill Road & Braselton Highway (S.R. 124) - AM PEAK

LOCATION#:	**005**	**QTD PROJ#:**	**2016157**
NORTH / SOUTH:	**Hamilton Mill Road**	**DATE:**	**Wednesday, March 16, 2016**
EAST / WEST:	**Braselton Highway (S.R. 124)**	**VICINITY:**	**GA**

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	2	1	1	2	2	1	1	1	1	
6:00 AM	4	57	10	98	19	29	61	61	1	5	39	171	555
6:15 AM	9	50	10	130	27	39	59	61	4	7	53	165	614
6:30 AM	5	66	15	103	49	54	80	37	3	5	65	144	626
6:45 AM	10	75	11	78	42	61	77	49	8	6	70	131	618
7:00 AM	8	76	5	50	41	75	74	28	6	5	87	189	644
7:15 AM	13	75	8	72	52	69	116	53	4	15	80	176	733
7:30 AM	18	82	15	114	58	74	105	42	7	7	89	169	780
7:45 AM	27	81	39	135	63	50	88	108	8	10	84	154	847
8:00 AM	18	92	30	92	56	54	109	85	16	9	81	168	810
8:15 AM	9	73	17	119	63	56	82	77	10	18	74	176	774
8:30 AM	7	75	18	110	52	53	89	74	10	15	75	165	743
8:45 AM	1	59	32	116	42	65	78	90	9	17	82	161	752

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	129	861	210	1217	564	679	1018	765	86	119	879	1969	8496
P.H.V: [1]	72	328	101	460	240	234	384	312	41	44	328	667	3211
P.H.F: [2]		0.852			0.942			0.877			0.969		0.948

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC
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VEHICLE TURNING MOVEMENT COUNT

#005 Hamilton Mill Road & Braselton Highway (S.R. 124) - PM PEAK

LOCATION#:	**005**	**QTD PROJ#:**	**2016157**
NORTH / SOUTH:	**Hamilton Mill Road**	**DATE:**	**Wednesday, March 16, 2016**
EAST / WEST:	**Braselton Highway (S.R. 124)**	**VICINITY:**	**GA**

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	2	1	1	2	2	1	1	1	1	
4:00 PM	2	44	26	221	93	74	89	119	20	22	104	148	962
4:15 PM	5	40	29	200	132	85	87	117	10	32	104	174	1015
4:30 PM	11	66	30	221	109	92	89	117	10	34	98	140	1017
4:45 PM	10	52	28	229	106	100	79	106	11	34	100	170	1025
5:00 PM	10	61	42	233	156	86	93	97	16	36	93	166	1089
5:15 PM	8	60	36	257	115	93	101	123	8	28	80	127	1036
5:30 PM	5	44	42	250	130	78	82	121	13	30	90	143	1028
5:45 PM	5	59	42	267	142	109	90	95	8	27	93	129	1066
6:00 PM	10	62	39	253	123	106	76	106	13	34	96	146	1064
6:15 PM	7	57	48	233	121	103	102	116	10	31	95	146	1069
6:30 PM	11	54	39	245	100	89	88	126	9	40	75	132	1008
6:45 PM	4	48	41	253	94	80	76	114	8	32	85	123	958

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	88	647	442	2862	1421	1095	1052	1357	136	380	1113	1744	12337
P.H.V: [1]	27	222	171	1003	516	396	350	438	44	122	374	564	4227
P.H.F: [2]		0.938			0.924			0.912			0.960		0.989

(1) Peak Hour Volume (Peak Hour Begins At 530 PM)
(2) Peak Hour Factor (directional aggregate)

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PEDESTRIAN CROSSWALK COUNTS

#005 Hamilton Mill Road & Braselton Highway (S.R. 124) - AM PEAK

LOCATION#:	005	QTD PROJ#:	2016157
NORTH / SOUTH:	Hamilton Mill Road	DATE:	Wednesday, March 16, 2016
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
6:00 AM	0	0	0	0	
6:15 AM	0	0	0	0	
6:30 AM	0	0	0	0	
6:45 AM	0	0	0	0	
7:00 AM	0	0	0	0	
7:15 AM	0	0	0	0	
7:30 AM	0	0	0	0	
7:45 AM	0	0	0	0	
8:00 AM	0	0	0	0	
8:15 AM	0	0	0	0	
8:30 AM	0	0	0	0	
8:45 AM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0
P.H.F: [2]	0.000	0.000	0.000	0.000	0.000

(1) Peak Hour Volume (Peak hour begins at: 0 AM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#005 Hamilton Mill Road & Braselton Highway (S.R. 124) - PM PEAK

LOCATION#:	005	QTD PROJ#:	2016157
NORTH / SOUTH:	Hamilton Mill Road	DATE:	Wednesday, March 16, 2016
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
4:00 PM	0	0	0	0	
4:15 PM	0	0	0	0	
4:30 PM	0	0	0	0	
4:45 PM	0	0	0	0	
5:00 PM	0	0	0	0	
5:15 PM	0	0	0	0	
5:30 PM	0	0	0	0	
5:45 PM	0	0	0	0	
6:00 PM	0	0	0	0	
6:15 PM	0	0	0	0	
6:30 PM	0	0	0	0	
6:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0
P.H.F: [2]	0.000	0.000	0.000	0.000	0.000

(1) Peak Hour Volume (Peak hour begins at: 0 AM)
(2) Peak Hour Factor

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BICYCLE TURNING MOVEMENT COUNT

#005 Hamilton Mill Road & Braselton Highway (S.R. 124) - AM PEAK

LOCATION#:	**005**	**QTD PROJ#:**	**2016157**
NORTH / SOUTH:	**Hamilton Mill Road**	**DATE:**	**Wednesday, March 16, 2016**
EAST / WEST:	**Braselton Highway (S.R. 124)**	**VICINITY:**	**GA**

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	2	1	1	2	2	1	1	1	1	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#005 Hamilton Mill Road & Braselton Highway (S.R. 124) - PM PEAK

LOCATION#:	005	QTD PROJ#:	2016157
NORTH / SOUTH:	Hamilton Mill Road	DATE:	Wednesday, March 16, 2016
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	2	1	1	2	2	1	1	1	1	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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PEAK HOUR ITM SUMMARY

#001 Jim Moore Road & Braselton Highway (S.R. 124)

LOCATION#:	001	QTD PROJ#:	2019123	AM PEAK:	815 AM
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019	MD PEAK:	1245 PM
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA	PM PEAK:	400 PM

Jim Moore Road

SOUTHBOUND LANES

LN			
	0	0	0
AM	0	0	0
MD	0	0	0
PM	0	0	0
TOTAL	0	0	0

Braselton Highway (S.R. 124)

EASTBOUND LANES

LN	AM	MD	PM	TOTAL
0	0	0	0	0
2	621	812	1044	2477
0	72	116	159	347

SIGNALIZED

WESTBOUND LANES

TOTAL	PM	MD	AM	LN
0	0	0	0	0
2689	984	715	990	2
185	99	35	51	1

Braselton Highway (S.R. 124)

TOTAL	440	0	245
PM	183	0	94
MD	156	0	70
AM	101	0	81
LN	1	0	1

NORTHBOUND LANES

Jim Moore Road

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AM COUNT	6:00 AM	TO	12:00 PM
MD COUNT	12:00 PM	TO	2:00 PM
PM COUNT	2:00 PM	TO	7:00 PM

VEHICLE TURNING MOVEMENT COUNT

#001 Jim Moore Road & Braselton Highway (S.R. 124) - AM PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	2	0	1	2	0	
6:00 AM	10	0	11	0	0	0	0	136	2	3	172	0	334
6:15 AM	13	0	12	0	0	0	0	193	1	7	185	0	411
6:30 AM	18	0	11	0	0	0	0	166	4	3	164	0	366
6:45 AM	22	0	3	0	0	0	0	148	5	6	210	0	394
7:00 AM	23	0	10	0	0	0	0	107	4	8	210	0	362
7:15 AM	30	0	9	0	0	0	0	94	6	6	227	0	372
7:30 AM	31	0	10	0	0	0	0	102	5	5	190	0	343
7:45 AM	32	0	18	0	0	0	0	143	16	8	217	0	434
8:00 AM	26	0	18	0	0	0	0	170	14	11	203	0	442
8:15 AM	28	0	16	0	0	0	0	159	18	11	242	0	474
8:30 AM	18	0	17	0	0	0	0	123	13	11	251	0	433
8:45 AM	32	0	28	0	0	0	0	182	22	14	218	0	496
9:00 AM	23	0	20	0	0	0	0	157	19	15	279	0	513
9:15 AM	35	0	16	0	0	0	0	127	17	12	203	0	410
9:30 AM	28	0	14	0	0	0	0	152	24	12	164	0	394
9:45 AM	28	0	13	0	0	0	0	147	23	11	156	0	378
10:00 AM	26	0	10	0	0	0	0	115	14	10	153	0	328
10:15 AM	34	0	15	0	0	0	0	107	27	8	208	0	399
10:30 AM	38	0	12	0	0	0	0	144	21	8	166	0	389
10:45 AM	28	0	15	0	0	0	0	137	6	18	195	0	399
11:00 AM	41	0	16	0	0	0	0	129	25	14	177	0	402
11:15 AM	30	0	14	0	0	0	0	142	20	17	201	0	424
11:30 AM	38	0	6	0	0	0	0	139	29	11	188	0	411
11:45 AM	40	0	28	0	0	0	0	159	30	16	159	0	432

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	672	0	342	0	0	0	0	3378	365	245	4738	0	9740
P.H.V: [1]	101	0	81	0	0	0	0	621	72	51	990	0	1916
P.H.F: [2]		0.758			0.000			0.849			0.885		0.934

(1) Peak Hour Volume (Peak Hour Begins At 815 AM)
(2) Peak Hour Factor (directional aggregate)

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VEHICLE TURNING MOVEMENT COUNT

#001 Jim Moore Road & Braselton Highway (S.R. 124) - MD PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	2	0	1	2	0	
12:00 PM	37	0	13	0	0	0	0	174	24	18	198	0	464
12:15 PM	40	0	9	0	0	0	0	153	28	13	224	0	467
12:30 PM	37	0	23	0	0	0	0	165	31	8	170	0	434
12:45 PM	44	0	15	0	0	0	0	201	30	9	198	0	497
1:00 PM	36	0	18	0	0	0	0	187	31	9	180	0	461
1:15 PM	36	0	16	0	0	0	0	231	29	9	131	0	452
1:30 PM	40	0	21	0	0	0	0	193	26	8	206	0	494
1:45 PM	23	0	20	0	0	0	0	223	34	7	170	0	477

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	293	0	135	0	0	0	0	1527	233	81	1477	0	3746
P.H.V: [1]	156	0	70	0	0	0	0	812	116	35	715	0	1904
P.H.F: [2]	0.926			0.000			0.892			0.876			0.958

(1) Peak Hour Volume (Peak Hour Begins At 1245 PM)
(2) Peak Hour Factor (directional aggregate)

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VEHICLE TURNING MOVEMENT COUNT

#001 Jim Moore Road & Braselton Highway (S.R. 124) - PM PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	2	0	1	2	0	
2:00 PM	40	0	22	0	0	0	0	215	23	16	177	0	493
2:15 PM	33	0	20	0	0	0	0	199	31	23	278	0	584
2:30 PM	33	0	16	0	0	0	0	234	34	14	217	0	548
2:45 PM	35	0	18	0	0	0	0	235	34	17	198	0	537
3:00 PM	38	0	17	0	0	0	0	216	39	25	223	0	558
3:15 PM	36	0	30	0	0	0	0	270	29	8	180	0	553
3:30 PM	27	0	29	0	0	0	0	245	31	19	204	0	555
3:45 PM	33	0	32	0	0	0	0	271	26	12	197	0	571
4:00 PM	44	0	25	0	0	0	0	248	33	33	256	0	639
4:15 PM	40	0	25	0	0	0	0	247	57	25	276	0	670
4:30 PM	52	0	22	0	0	0	0	260	40	23	248	0	645
4:45 PM	47	0	22	0	0	0	0	289	29	18	204	0	609
5:00 PM	42	0	23	0	0	0	0	247	38	16	222	0	588
5:15 PM	39	0	23	0	0	0	0	241	33	11	194	0	541
5:30 PM	29	0	19	0	0	0	0	316	41	11	178	0	594
5:45 PM	40	0	24	0	0	0	0	277	42	16	251	0	650
6:00 PM	31	0	22	0	0	0	0	237	53	19	264	0	626
6:15 PM	44	0	15	0	0	0	0	251	28	14	188	0	540
6:30 PM	29	0	22	0	0	0	0	194	49	10	197	0	501
6:45 PM	28	0	12	0	0	0	0	181	20	9	162	0	412

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	740	0	438	0	0	0	0	4873	710	339	4314	0	11414
P.H.V: [1]	183	0	94	0	0	0	0	1044	159	99	984	0	2563
P.H.F: [2]		0.936			0.000			0.946			0.900		0.956

(1) Peak Hour Volume (Peak Hour Begins At 400 PM)
(2) Peak Hour Factor (directional aggregate)

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PEDESTRIAN CROSSWALK COUNTS

#001 Jim Moore Road & Braselton Highway (S.R. 124) - AM PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
6:00 AM	0	0	0	0	
6:15 AM	0	0	0	0	
6:30 AM	0	0	0	0	
6:45 AM	0	0	0	0	
7:00 AM	0	0	0	0	
7:15 AM	0	0	0	0	
7:30 AM	0	0	0	0	
7:45 AM	0	0	0	0	
8:00 AM	0	0	0	0	
8:15 AM	0	0	0	0	
8:30 AM	0	2	0	0	2
8:45 AM	0	0	0	0	
9:00 AM	0	0	0	0	
9:15 AM	0	0	0	0	
9:30 AM	0	0	0	0	
9:45 AM	0	0	0	0	
10:00 AM	0	0	0	0	
10:15 AM	0	0	0	0	
10:30 AM	0	2	0	0	2
10:45 AM	0	2	0	0	
11:00 AM	0	2	0	0	
11:15 AM	0	0	0	0	
11:30 AM	0	0	0	1	
11:45 AM	0	0	0	3	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	8	0	4	12
P.H.V: [1]	0	2	0	4	6
P.H.F: [2]	0.000	0.250	0.000	0.333	0.500

(1) Peak Hour Volume (Peak hour begins at: 1100 AM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#001 Jim Moore Road & Braselton Highway (S.R. 124) - MD PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
12:00 PM	0	0	0	2	2
12:15 PM	0	0	0	0	
12:30 PM	0	0	0	0	
12:45 PM	0	0	0	0	
1:00 PM	0	1	0	0	1
1:15 PM	0	0	0	0	
1:30 PM	0	0	0	0	
1:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	1	0	2	3
P.H.V: [1]	0	0	0	2	2
P.H.F: [2]	0.000	0.000	0.000	0.250	0.250

(1) Peak Hour Volume (Peak hour begins at: 1200 PM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#001 Jim Moore Road & Braselton Highway (S.R. 124) - PM PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
2:00 PM	0	0	0	0	
2:15 PM	0	0	0	1	1
2:30 PM	0	0	0	1	1
2:45 PM	0	0	0	0	
3:00 PM	0	0	0	4	4
3:15 PM	0	0	0	0	
3:30 PM	0	0	0	0	
3:45 PM	0	0	0	0	
4:00 PM	0	0	0	0	
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	
4:45 PM	0	1	0	1	2
5:00 PM	0	0	0	0	
5:15 PM	0	0	0	0	
5:30 PM	0	1	0	0	1
5:45 PM	0	0	0	0	
6:00 PM	0	0	0	0	
6:15 PM	0	0	0	1	1
6:30 PM	0	0	0	0	
6:45 PM	0	0	0	2	2

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	3	0	10	13
P.H.V: [1]	0	0	0	6	6
P.H.F: [2]	0.000	0.000	0.000	0.375	0.375

(1) Peak Hour Volume (Peak hour begins at: 215 PM)
(2) Peak Hour Factor

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BICYCLE TURNING MOVEMENT COUNT

#001 Jim Moore Road & Braselton Highway (S.R. 124) - AM PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	2	0	1	2	0	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: (1)	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: (2)		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#001 Jim Moore Road & Braselton Highway (S.R. 124) - MD PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	2	0	1	2	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	1	0	0	0	0	0	0	0	0	0	0	0	1
P.H.V: [1]	1	0	0	0	0	0	0	0	0	0	0	0	1
P.H.F: [2]		0.250			0.000			0.000			0.000		0.250

(1) Peak Hour Volume (Peak Hour Begins At 545 PM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#001 Jim Moore Road & Braselton Highway (S.R. 124) - PM PEAK

LOCATION#:	001	QTD PROJ#:	2019123
NORTH / SOUTH:	Jim Moore Road	DATE:	Thursday, February 07, 2019
EAST / WEST:	Braselton Highway (S.R. 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	2	0	1	2	0	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	1	0	0	0	0	0	0	0	0	0	0	0	1
P.H.V: [1]	1	0	0	0	0	0	0	0	0	0	0	0	1
P.H.F: [2]		0.250			0.000			0.000			0.000		0.250

(1) Peak Hour Volume (Peak Hour Begins At 545 PM)
(2) Peak Hour Factor (directional aggregate)

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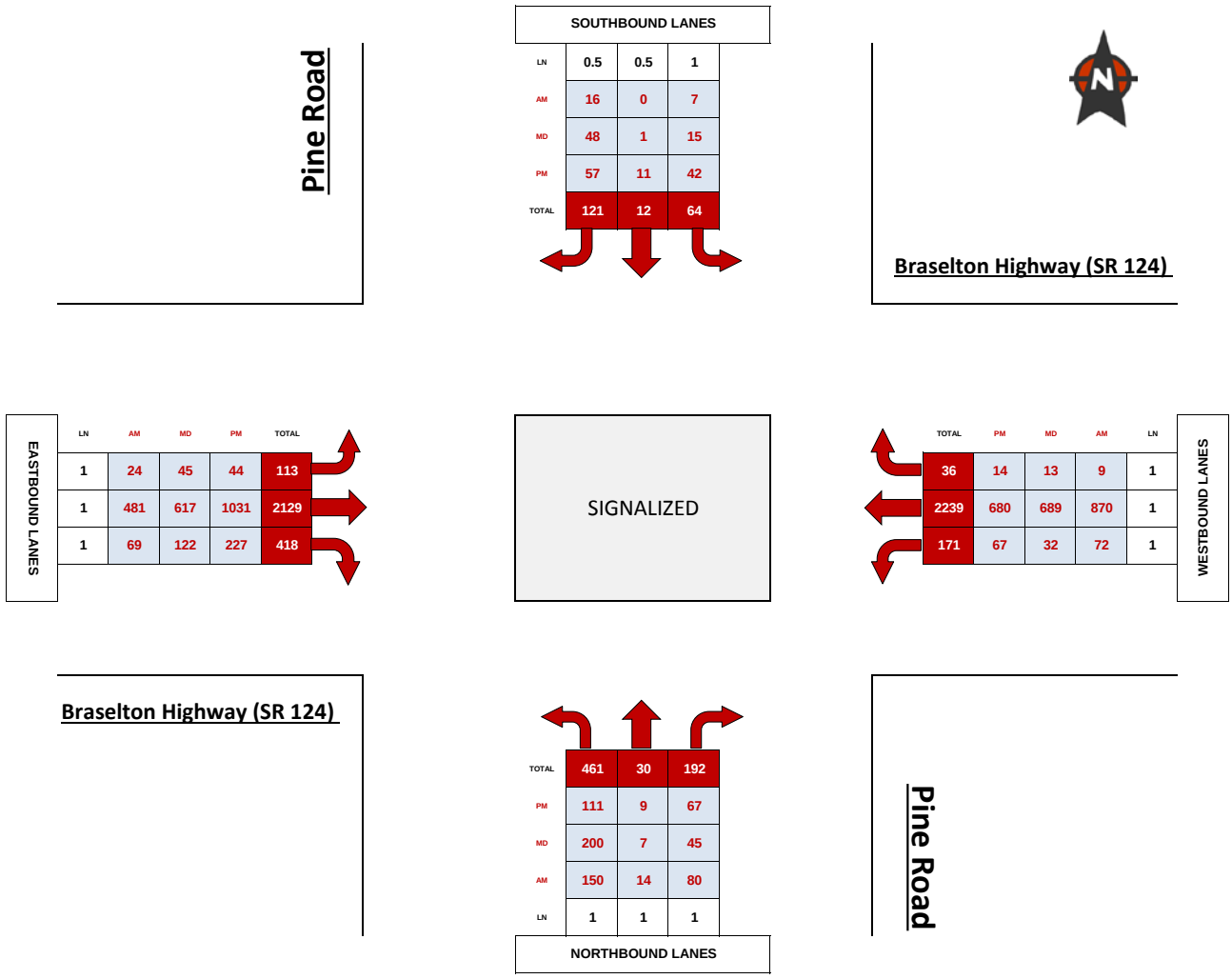
PEAK HOUR ITM SUMMARY

#002 Pine Road & Braselton Highway (SR 124)

LOCATION#:	002	QTD PROJ#:	2017349	AM PEAK:	815 AM
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017	MD PEAK:	1200 PM
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA	PM PEAK:	500 PM



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AM COUNT	6:00 AM	TO	12:00 PM
MD COUNT	12:00 PM	TO	2:00 PM
PM COUNT	2:00 PM	TO	7:00 PM

VEHICLE TURNING MOVEMENT COUNT

#002 Pine Road & Braselton Highway (SR 124) - AM PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	0.5	0.5	1	1	1	1	1	1	
6:00 AM	29	1	10	1	0	2	4	82	6	7	159	1	302
6:15 AM	21	1	6	1	0	0	16	113	18	10	179	2	367
6:30 AM	32	4	4	2	0	5	16	51	33	17	164	2	330
6:45 AM	25	3	9	1	0	1	10	61	30	25	191	1	357
7:00 AM	39	1	8	1	0	4	3	68	14	25	181	1	345
7:15 AM	29	2	8	0	1	1	4	76	4	22	200	0	347
7:30 AM	25	1	11	0	0	4	3	63	5	14	187	2	315
7:45 AM	27	1	22	3	0	2	2	104	17	24	197	1	400
8:00 AM	40	1	33	0	0	1	7	133	28	22	188	0	453
8:15 AM	37	2	26	1	0	4	7	102	14	22	234	2	451
8:30 AM	21	2	15	2	0	3	6	103	16	13	206	2	389
8:45 AM	29	3	17	2	0	1	5	143	19	15	231	3	468
9:00 AM	63	7	22	2	0	8	6	133	20	22	199	2	484
9:15 AM	42	2	11	2	0	3	2	101	9	12	192	1	377
9:30 AM	17	1	9	2	2	1	8	87	14	12	210	2	365
9:45 AM	24	0	4	5	0	10	9	93	15	5	168	3	336
10:00 AM	19	2	7	4	2	8	11	115	17	3	175	2	365
10:15 AM	22	2	8	4	0	8	13	128	14	9	178	4	390
10:30 AM	20	4	4	2	4	12	16	111	26	9	199	8	415
10:45 AM	16	0	2	4	2	6	1	125	38	8	167	2	371
11:00 AM	22	2	10	3	1	4	2	139	47	4	148	2	384
11:15 AM	18	0	7	3	0	9	7	139	34	7	184	0	408
11:30 AM	31	1	12	3	2	29	9	147	19	8	174	4	439
11:45 AM	16	1	8	3	2	16	15	158	18	7	174	5	423

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	664	44	273	51	16	142	182	2575	475	322	4485	52	9281
P.H.V: [1]	150	14	80	7	0	16	24	481	69	72	870	9	1792
P.H.F: [2]		0.663			0.575			0.859			0.922		0.926

(1) Peak Hour Volume (Peak Hour Begins At 815 AM)
(2) Peak Hour Factor (directional aggregate)

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VEHICLE TURNING MOVEMENT COUNT

#002 Pine Road & Braselton Highway (SR 124) - MD PEAK

LOCATION#:	**002**	**QTD PROJ#:**	**2017349**
NORTH / SOUTH:	**Pine Road**	**DATE:**	**Wednesday, December 13, 2017**
EAST / WEST:	**Braselton Highway (SR 124)**	**VICINITY:**	**GA**

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	0.5	0.5	1	1	1	1	1	1	
12:00 PM	21	1	3	4	1	10	22	150	29	9	176	1	427
12:15 PM	69	5	10	4	0	16	12	141	29	9	173	6	474
12:30 PM	84	0	23	5	0	13	6	185	35	9	179	4	543
12:45 PM	26	1	9	2	0	9	5	141	29	5	161	2	390
1:00 PM	25	1	4	4	0	10	12	161	22	4	166	2	411
1:15 PM	26	2	5	3	0	8	17	165	27	6	172	1	432
1:30 PM	18	3	5	6	0	4	8	187	19	8	162	1	421
1:45 PM	22	2	13	6	1	7	9	220	24	5	156	4	469

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	291	15	72	34	2	77	91	1350	214	55	1345	21	3567
P.H.V: [1]	200	7	45	15	1	48	45	617	122	32	689	13	1834
P.H.F: [2]		0.589			0.800			0.867			0.956		0.844

(1) Peak Hour Volume (Peak Hour Begins At 1200 PM)
(2) Peak Hour Factor (directional aggregate)

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VEHICLE TURNING MOVEMENT COUNT

#002 Pine Road & Braselton Highway (SR 124) - PM PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	0.5	0.5	1	1	1	1	1	1	
2:00 PM	28	0	5	8	1	12	8	208	33	11	169	7	490
2:15 PM	26	0	8	2	0	10	9	229	41	19	182	4	530
2:30 PM	30	3	10	4	3	5	7	184	34	13	207	8	508
2:45 PM	20	4	13	3	4	7	11	208	31	9	227	6	543
3:00 PM	28	2	15	7	2	7	23	228	38	19	174	9	552
3:15 PM	19	4	21	5	1	10	12	240	45	13	161	3	534
3:30 PM	30	1	16	1	4	16	22	226	43	19	169	10	557
3:45 PM	16	2	21	5	2	11	20	222	54	11	171	3	538
4:00 PM	20	4	20	12	7	51	11	238	48	23	186	10	630
4:15 PM	22	5	14	11	3	24	17	227	37	20	175	11	566
4:30 PM	27	2	9	7	3	20	29	216	46	23	201	8	591
4:45 PM	36	5	16	12	3	16	14	225	53	11	172	6	569
5:00 PM	22	2	11	6	2	14	18	278	52	16	183	1	605
5:15 PM	32	1	18	9	3	16	12	261	63	20	145	5	585
5:30 PM	34	3	20	17	2	13	5	228	55	18	159	4	558
5:45 PM	23	3	18	10	4	14	9	264	57	13	193	4	612
6:00 PM	20	3	16	12	1	6	6	237	41	15	198	4	559
6:15 PM	23	1	11	7	2	14	11	227	40	12	180	7	535
6:30 PM	19	5	7	4	2	11	12	244	42	12	161	6	525
6:45 PM	14	1	4	6	5	9	7	237	37	12	158	2	492

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	489	51	273	148	54	286	263	4627	890	309	3571	118	11079
P.H.V: [1]	111	9	67	42	11	57	44	1031	227	67	680	14	2360
P.H.F: [2]		0.820			0.859			0.935			0.906		0.964

(1) Peak Hour Volume (Peak Hour Begins At 500 PM)
(2) Peak Hour Factor (directional aggregate)

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PEDESTRIAN CROSSWALK COUNTS

#002 Pine Road & Braselton Highway (SR 124) - AM PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
6:00 AM	0	0	0	0	
6:15 AM	0	0	0	0	
6:30 AM	0	0	0	0	
6:45 AM	0	0	0	0	
7:00 AM	0	0	0	0	
7:15 AM	0	0	0	0	
7:30 AM	0	0	0	0	
7:45 AM	0	0	0	0	
8:00 AM	0	0	0	0	
8:15 AM	0	0	0	0	
8:30 AM	0	0	0	0	
8:45 AM	0	0	0	0	
9:00 AM	0	0	0	0	
9:15 AM	0	0	0	0	
9:30 AM	0	0	0	0	
9:45 AM	0	0	0	0	
10:00 AM	0	0	0	0	
10:15 AM	0	0	0	0	
10:30 AM	0	0	0	0	
10:45 AM	0	0	0	0	
11:00 AM	0	0	0	0	
11:15 AM	0	0	0	0	
11:30 AM	0	0	0	2	
11:45 AM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	0	0	2	2
P.H.V: [1]	0	0	0	2	2
P.H.F: [2]	0.000	0.000	0.000	0.250	0.250

(1) Peak Hour Volume (Peak hour begins at: 1130 AM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#002 Pine Road & Braselton Highway (SR 124) - MD PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
12:00 PM	0	0	0	0	
12:15 PM	0	0	0	0	
12:30 PM	0	0	0	0	
12:45 PM	1	0	0	0	1
1:00 PM	0	0	0	0	
1:15 PM	0	0	0	0	
1:30 PM	0	0	0	0	
1:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	1	0	0	0	1
P.H.V: [1]	1	0	0	0	1
P.H.F: [2]	0.250	0.000	0.000	0.000	0.250

(1) Peak Hour Volume (Peak hour begins at: 1245 PM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#002 Pine Road & Braselton Highway (SR 124) - PM PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
2:00 PM	0	0	0	0	
2:15 PM	0	0	0	0	
2:30 PM	0	0	0	0	
2:45 PM	0	0	0	0	
3:00 PM	0	0	0	0	
3:15 PM	0	0	0	0	
3:30 PM	0	0	1	0	1
3:45 PM	0	0	0	0	
4:00 PM	0	0	0	0	
4:15 PM	0	0	0	0	
4:30 PM	0	0	0	0	
4:45 PM	0	0	0	0	
5:00 PM	0	0	0	0	
5:15 PM	0	0	0	0	
5:30 PM	0	0	0	0	
5:45 PM	0	0	0	0	
6:00 PM	0	0	0	0	
6:15 PM	0	0	0	0	
6:30 PM	0	0	0	0	
6:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	0	1	0	1
P.H.V: [1]	0	0	1	0	1
P.H.F: [2]	0.000	0.000	0.250	0.000	0.250

(1) Peak Hour Volume (Peak hour begins at: 330 PM)
(2) Peak Hour Factor

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BICYCLE TURNING MOVEMENT COUNT

#002 Pine Road & Braselton Highway (SR 124) - AM PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	0.5	0.5	1	1	1	1	1	1	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: (1)	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: (2)		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#002 Pine Road & Braselton Highway (SR 124) - MD PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	0.5	0.5	1	1	1	1	1	1	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#002 Pine Road & Braselton Highway (SR 124) - PM PEAK

LOCATION#:	002	QTD PROJ#:	2017349
NORTH / SOUTH:	Pine Road	DATE:	Wednesday, December 13, 2017
EAST / WEST:	Braselton Highway (SR 124)	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	1	1	1	0.5	0.5	1	1	1	1	1	1	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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PEAK HOUR ITM SUMMARY

#001 Huntington Hill Trace & Braselton Hwy

LOCATION#:	001	QTD PROJ#:	2018144	AM PEAK:	815 AM
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018	MD PEAK:	100 PM
EAST / WEST:	Braselton Hwy	VICINITY:	GA	PM PEAK:	500 PM

Huntington Hill Trace

SOUTHBOUND LANES

LN			
AM	0	0	0
MD	0	0	0
PM	0	0	0
TOTAL	0	0	0

Braselton Hwy

EASTBOUND LANES

LN	AM	MD	PM	TOTAL
0	0	0	0	0
1	522	681	1176	2379
1	14	25	56	95

SIGNALIZED

WESTBOUND LANES

TOTAL	PM	MD	AM	LN
0	0	0	0	0
2307	758	617	932	2
57	25	15	17	0

Braselton Hwy

NORTHBOUND LANES

TOTAL			
PM	17	0	26
MD	24	0	12
AM	41	0	27
LN	1	0	1

Huntington Hill Trace

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AM COUNT	6:00 AM	TO	12:00 PM
MD COUNT	12:00 PM	TO	2:00 PM
PM COUNT	2:00 PM	TO	7:00 PM

VEHICLE TURNING MOVEMENT COUNT

#001 Huntington Hill Trace & Braselton Hwy - AM PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	1	1	0	2	0	
6:00 AM	10	0	4	0	0	0	0	78	0	3	160	0	255
6:15 AM	9	0	8	0	0	0	0	119	3	2	186	0	327
6:30 AM	13	0	12	0	0	0	0	91	3	3	199	0	321
6:45 AM	15	0	7	0	0	0	0	71	1	3	203	0	300
7:00 AM	11	0	4	0	0	0	0	55	2	4	161	0	237
7:15 AM	9	0	9	0	0	0	0	61	1	0	211	0	291
7:30 AM	10	0	7	0	0	0	0	71	1	3	200	0	292
7:45 AM	9	0	10	0	0	0	0	100	6	1	224	0	350
8:00 AM	14	0	13	0	0	0	0	164	1	8	194	0	394
8:15 AM	7	0	11	0	0	0	0	125	3	6	247	0	399
8:30 AM	14	0	5	0	0	0	0	88	2	6	237	0	352
8:45 AM	9	0	7	0	0	0	0	150	5	3	221	0	395
9:00 AM	11	0	4	0	0	0	0	159	4	2	227	0	407
9:15 AM	7	0	3	0	0	0	0	100	3	3	259	0	375
9:30 AM	6	0	2	0	0	0	0	105	5	1	182	0	301
9:45 AM	9	0	2	0	0	0	0	107	7	3	163	0	291
10:00 AM	7	0	2	0	0	0	0	97	3	1	158	0	268
10:15 AM	9	0	2	0	0	0	0	92	5	4	147	0	259
10:30 AM	11	0	5	0	0	0	0	109	4	0	150	0	279
10:45 AM	6	0	2	0	0	0	0	117	7	3	177	0	312
11:00 AM	7	0	5	0	0	0	0	132	6	0	146	0	296
11:15 AM	6	0	4	0	0	0	0	128	6	0	147	0	291
11:30 AM	7	0	5	0	0	0	0	121	7	3	148	0	291
11:45 AM	6	0	1	0	0	0	0	126	9	2	171	0	315

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	222	0	134	0	0	0	0	2566	94	64	4518	0	7598
P.H.V: [1]	41	0	27	0	0	0	0	522	14	17	932	0	1553
P.H.F: [2]		0.895			0.000			0.822			0.938		0.954

(1) Peak Hour Volume (Peak Hour Begins At 815 AM)
(2) Peak Hour Factor (directional aggregate)

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VEHICLE TURNING MOVEMENT COUNT

#001 Huntington Hill Trace & Braselton Hwy - MD PEAK

LOCATION#:	**001**	**QTD PROJ#:**	**2018144**
NORTH / SOUTH:	**Huntington Hill Trace**	**DATE:**	**Tuesday, March 13, 2018**
EAST / WEST:	**Braselton Hwy**	**VICINITY:**	**GA**

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	1	1	0	2	0	
12:00 PM	3	0	1	0	0	0	0	138	7	2	182	0	333
12:15 PM	5	0	3	0	0	0	0	151	2	2	164	0	327
12:30 PM	8	0	2	0	0	0	0	160	10	2	163	0	345
12:45 PM	3	0	3	0	0	0	0	156	6	5	163	0	336
1:00 PM	6	0	4	0	0	0	0	145	7	3	158	0	323
1:15 PM	9	0	2	0	0	0	0	166	5	4	169	0	355
1:30 PM	2	0	4	0	0	0	0	163	4	4	145	0	322
1:45 PM	7	0	2	0	0	0	0	207	9	4	145	0	374

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	43	0	21	0	0	0	0	1286	50	26	1289	0	2715
P.H.V: [1]	24	0	12	0	0	0	0	681	25	15	617	0	1374
P.H.F: [2]		0.818			0.000			0.817			0.913		0.918

(1) Peak Hour Volume (Peak Hour Begins At 100 PM)
(2) Peak Hour Factor (directional aggregate)

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VEHICLE TURNING MOVEMENT COUNT

#001 Huntington Hill Trace & Braselton Hwy - PM PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	1	1	0	2	0	
2:00 PM	9	0	3	0	0	0	0	192	6	1	171	0	382
2:15 PM	3	0	5	0	0	0	0	204	6	5	204	0	427
2:30 PM	7	0	6	0	0	0	0	195	8	5	223	0	444
2:45 PM	6	0	7	0	0	0	0	189	6	2	171	0	381
3:00 PM	5	0	5	0	0	0	0	219	15	4	165	0	413
3:15 PM	1	0	5	0	0	0	0	232	9	6	158	0	411
3:30 PM	9	0	4	0	0	0	0	240	13	11	179	0	456
3:45 PM	8	0	6	0	0	0	0	261	10	7	210	0	502
4:00 PM	4	0	6	0	0	0	0	242	10	5	217	0	484
4:15 PM	7	0	5	0	0	0	0	240	7	6	219	0	484
4:30 PM	3	0	5	0	0	0	0	264	16	5	195	0	488
4:45 PM	6	0	7	0	0	0	0	251	13	7	184	0	468
5:00 PM	1	0	7	0	0	0	0	280	5	8	206	0	507
5:15 PM	6	0	10	0	0	0	0	312	19	8	192	0	547
5:30 PM	3	0	3	0	0	0	0	306	20	5	196	0	533
5:45 PM	7	0	6	0	0	0	0	278	12	4	164	0	471
6:00 PM	4	0	5	0	0	0	0	234	18	3	193	0	457
6:15 PM	7	0	5	0	0	0	0	238	17	4	173	0	444
6:30 PM	5	0	3	0	0	0	0	238	23	8	164	0	441
6:45 PM	11	0	5	0	0	0	0	221	12	3	163	0	415

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	112	0	108	0	0	0	0	4836	245	107	3747	0	9155
P.H.V: [1]	17	0	26	0	0	0	0	1176	56	25	758	0	2058
P.H.F: [2]		0.672			0.000			0.931			0.915		0.941

(1) Peak Hour Volume (Peak Hour Begins At 500 PM)
(2) Peak Hour Factor (directional aggregate)

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PEDESTRIAN CROSSWALK COUNTS

#001 Huntington Hill Trace & Braselton Hwy - AM PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
6:00 AM	0	0	0	0	
6:15 AM	0	0	0	0	
6:30 AM	0	0	0	0	
6:45 AM	0	0	0	0	
7:00 AM	0	0	0	0	
7:15 AM	0	0	0	0	
7:30 AM	0	0	0	0	
7:45 AM	0	0	0	0	
8:00 AM	0	0	0	0	
8:15 AM	0	0	0	0	
8:30 AM	0	0	0	0	
8:45 AM	0	0	0	0	
9:00 AM	0	0	0	0	
9:15 AM	0	0	0	0	
9:30 AM	0	0	0	0	
9:45 AM	0	0	0	0	
10:00 AM	0	0	0	0	
10:15 AM	0	0	0	1	1
10:30 AM	0	0	0	0	
10:45 AM	0	0	0	0	
11:00 AM	0	0	0	0	
11:15 AM	0	1	0	0	
11:30 AM	0	0	0	0	
11:45 AM	0	2	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	3	0	1	4
P.H.V: (1)	0	3	0	0	3
P.H.F: (2)	0.000	0.375	0.000	0.000	0.375

(1) Peak Hour Volume (Peak hour begins at: 1115 AM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#001 Huntington Hill Trace & Braselton Hwy - MD PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
12:00 PM	0	2	0	0	2
12:15 PM	0	1	0	0	1
12:30 PM	0	3	0	0	3
12:45 PM	0	0	0	0	
1:00 PM	0	0	0	0	
1:15 PM	0	0	0	0	
1:30 PM	0	0	0	0	
1:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	6	0	0	6
P.H.V: [1]	0	6	0	0	6
P.H.F: [2]	0.000	0.500	0.000	0.000	0.500

(1) Peak Hour Volume (Peak hour begins at: 1200 PM)
(2) Peak Hour Factor

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PEDESTRIAN CROSSWALK COUNTS

#001 Huntington Hill Trace & Braselton Hwy - PM PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	TOTALS
2:00 PM	0	0	0	0	
2:15 PM	0	0	0	0	
2:30 PM	0	0	0	0	
2:45 PM	0	0	0	0	
3:00 PM	0	0	0	0	
3:15 PM	0	0	0	0	
3:30 PM	0	0	0	0	
3:45 PM	0	0	0	0	
4:00 PM	0	0	0	0	
4:15 PM	0	0	0	0	
4:30 PM	0	0	0	0	
4:45 PM	0	0	0	0	
5:00 PM	0	0	0	0	
5:15 PM	0	0	0	0	
5:30 PM	0	0	0	0	
5:45 PM	0	0	0	0	
6:00 PM	0	0	0	0	
6:15 PM	0	0	0	0	
6:30 PM	0	0	0	0	
6:45 PM	0	0	0	0	

VOLUME STATS:	NORTHERN CROSSWALK	SOUTHERN CROSSWALK	EASTERN CROSSWALK	WESTERN CROSSWALK	
TOTAL:	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0
P.H.F: [2]	0.000	0.000	0.000	0.000	0.000

(1) Peak Hour Volume (Peak hour begins at: 0 AM)
(2) Peak Hour Factor

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BICYCLE TURNING MOVEMENT COUNT

#001 Huntington Hill Trace & Braselton Hwy - AM PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	1	1	0	2	0	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#001 Huntington Hill Trace & Braselton Hwy - MD PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	1	1	0	2	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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BICYCLE TURNING MOVEMENT COUNT

#001 Huntington Hill Trace & Braselton Hwy - PM PEAK

LOCATION#:	001	QTD PROJ#:	2018144
NORTH / SOUTH:	Huntington Hill Trace	DATE:	Tuesday, March 13, 2018
EAST / WEST:	Braselton Hwy	VICINITY:	GA

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	0	1	0	0	0	0	1	1	0	2	0	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.V: [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.F: [2]		0.000			0.000			0.000			0.000		0.000

(1) Peak Hour Volume (Peak Hour Begins At 0 AM)
(2) Peak Hour Factor (directional aggregate)

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TMC Data
Braselton Hwy (GA124) @ Spout Springs Rd

7-9am I 4-6pm

File Name : 42140001
Site Code : 42140001
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Mineral Springs Rd Northbound					Spout Springs Rd Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	21	25	6	0	52	23	22	68	0	113	18	47	3	0	68	12	122	42	0	176	409
07:15 AM	29	47	3	0	79	25	26	80	0	131	22	46	5	0	73	4	107	28	0	139	422
07:30 AM	28	50	6	0	84	28	32	85	0	145	37	65	6	0	108	5	109	25	0	139	476
07:45 AM	13	48	8	0	69	36	30	97	0	163	35	79	5	0	119	3	139	31	0	173	524
Total	91	170	23	0	284	112	110	330	0	552	112	237	19	0	368	24	477	126	0	627	1831
08:00 AM	15	27	17	0	59	45	29	78	0	152	52	107	6	0	165	10	134	36	0	180	556
08:15 AM	21	28	20	0	69	42	26	93	0	161	48	113	4	0	165	17	148	39	0	204	599
08:30 AM	23	25	18	0	66	46	24	82	0	152	57	109	6	0	172	11	153	42	0	206	596
08:45 AM	19	22	21	0	62	43	22	86	0	151	42	106	6	0	154	16	157	40	0	213	580
Total	78	102	76	0	256	176	101	339	0	616	199	435	22	0	656	54	592	157	0	803	2331
*** BREAK ***																					
04:00 PM	9	37	8	0	54	43	38	62	0	143	93	164	16	0	273	6	133	26	0	165	635
04:15 PM	10	25	5	0	40	57	37	63	0	157	103	167	17	0	287	5	137	29	0	171	655
04:30 PM	12	28	4	0	44	51	45	82	0	178	99	170	15	0	284	7	123	25	0	155	661
04:45 PM	15	40	7	0	62	49	48	70	0	167	98	174	18	0	290	7	106	22	0	135	654
Total	46	130	24	0	200	200	168	277	0	645	393	675	66	0	1134	25	499	102	0	626	2605
05:00 PM	13	33	6	0	52	54	58	65	0	177	103	192	18	0	313	10	109	19	0	138	680
05:15 PM	18	34	9	0	61	57	61	66	0	184	105	197	26	0	328	5	102	20	0	127	700
05:30 PM	19	37	11	0	67	52	65	89	0	206	102	206	16	0	324	4	99	22	0	125	722
05:45 PM	13	32	8	0	53	50	53	76	0	179	95	198	21	0	314	7	94	17	0	118	664
Total	63	136	34	0	233	213	237	296	0	746	405	793	81	0	1279	26	404	78	0	508	2766
Grand Total	278	538	157	0	973	701	616	1242	0	2559	1109	2140	188	0	3437	129	1972	463	0	2564	9533
Apprch %	28.6	55.3	16.1	0		27.4	24.1	48.5	0		32.3	62.3	5.5	0		5	76.9	18.1	0		
Total %	2.9	5.6	1.6	0	10.2	7.4	6.5	13	0	26.8	11.6	22.4	2	0	36.1	1.4	20.7	4.9	0	26.9	

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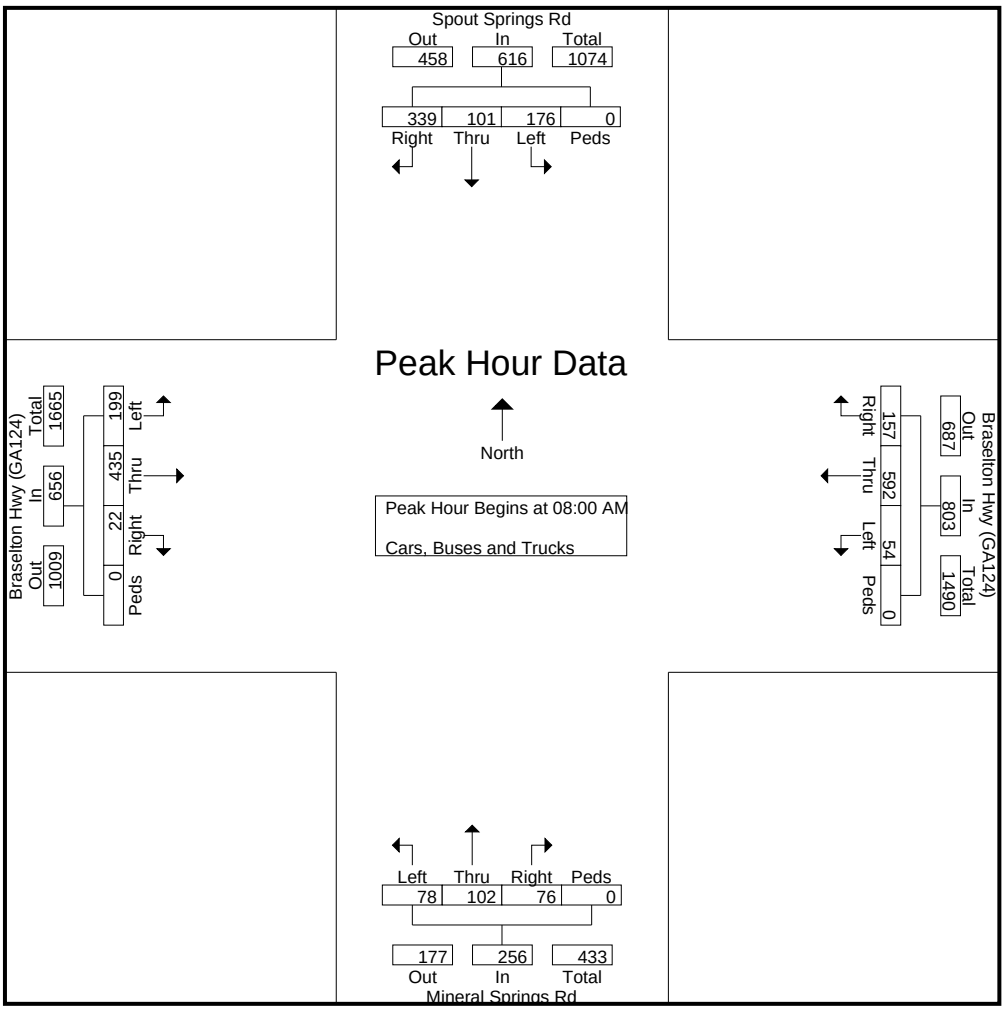
TMC Data
Braselton Hwy (GA124) @ Spout Springs Rd

7-9am I 4-6pm

File Name : 42140001
Site Code : 42140001
Start Date : 5/22/2018

	Mineral Springs Rd Northbound					Spout Springs Rd Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	15	27	17	0	59	45	**29**	78	0	152	52	107	**6**	0	165	10	134	36	0	180	556
08:15 AM	21	**28**	20	0	**69**	42	26	**93**	0	**161**	48	**113**	4	0	165	**17**	148	39	0	204	**599**
08:30 AM	**23**	25	18	0	66	**46**	24	82	0	152	**57**	109	6	0	**172**	11	153	**42**	0	206	596
08:45 AM	19	22	**21**	0	62	43	22	86	0	151	42	106	6	0	154	16	**157**	40	0	**213**	580
Total Volume	78	102	76	0	256	176	101	339	0	616	199	435	22	0	656	54	592	157	0	803	2331
% App. Total	30.5	39.8	29.7	0		28.6	16.4	55	0		30.3	66.3	3.4	0		6.7	73.7	19.6	0		
PHF	.848	.911	.905	.000	.928	.957	.871	.911	.000	.957	.873	.962	.917	.000	.953	.794	.943	.935	.000	.942	.973



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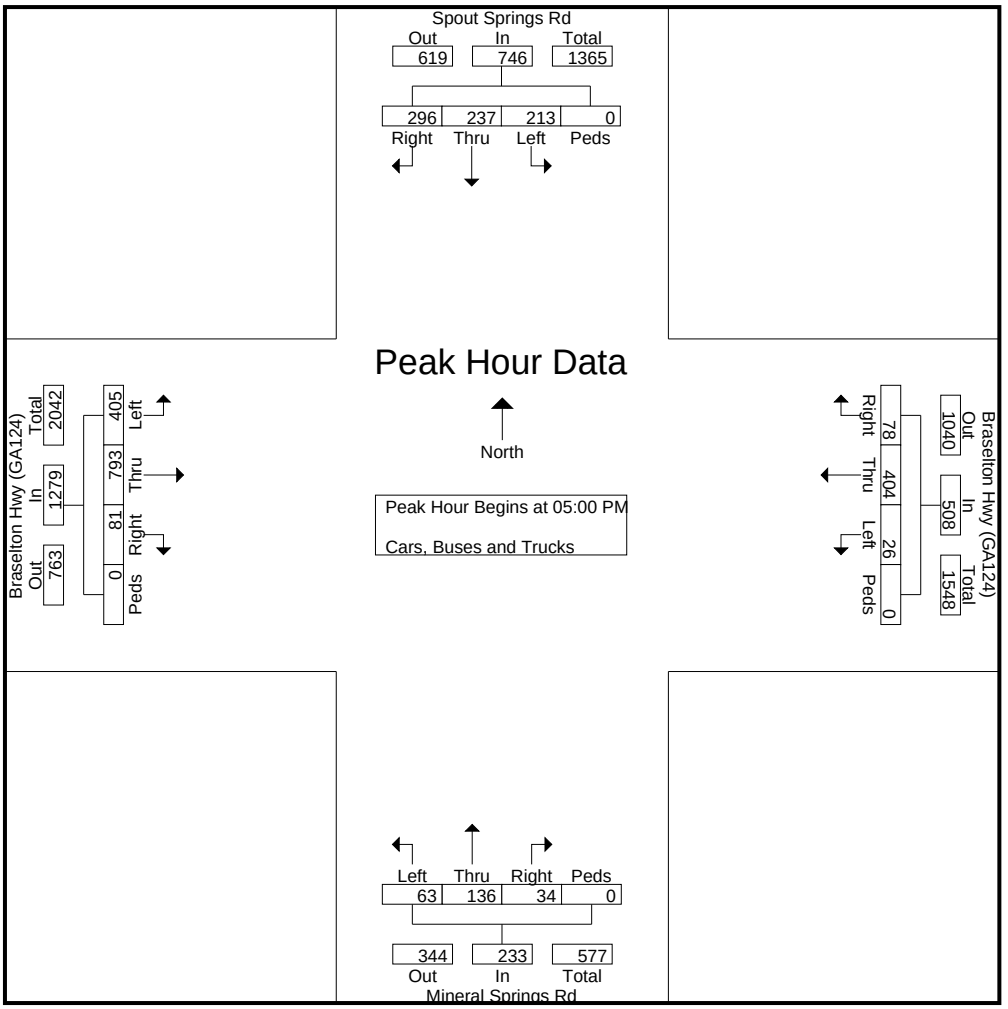
TMC Data
Braselton Hwy (GA124) @ Spout Springs Rd

7-9am I 4-6pm

File Name : 42140001
Site Code : 42140001
Start Date : 5/22/2018
Page No : 3

	Mineral Springs Rd Northbound					Spout Springs Rd Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	33	6	0	52	54	58	65	0	177	103	192	18	0	313	**10**	**109**	19	0	**138**	680
05:15 PM	18	34	9	0	61	**57**	61	66	0	184	**105**	197	**26**	0	**328**	5	102	20	0	127	700
05:30 PM	**19**	**37**	**11**	0	**67**	52	**65**	**89**	0	**206**	102	**206**	16	0	324	4	99	**22**	0	125	**722**
05:45 PM	13	32	8	0	53	50	53	76	0	179	95	198	21	0	314	7	94	17	0	118	664
Total Volume	63	136	34	0	233	213	237	296	0	746	405	793	81	0	1279	26	404	78	0	508	2766
% App. Total	27	58.4	14.6	0		28.6	31.8	39.7	0		31.7	62	6.3	0		5.1	79.5	15.4	0		
PHF	.829	.919	.773	.000	.869	.934	.912	.831	.000	.905	.964	.962	.779	.000	.975	.650	.927	.886	.000	.920	.958



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TMC Data
Braselton Hwy (GA124) @ Holman Rd

7-9am I 4-6pm

File Name : 42140002
Site Code : 42140002
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Holman Rd Northbound					Private Drwy Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	0	12	0	16	0	0	0	0	0	0	69	0	0	69	6	191	0	0	197	282
07:15 AM	4	0	4	0	8	0	0	0	0	0	0	67	2	0	69	1	121	0	0	122	199
07:30 AM	5	0	1	0	6	0	0	1	0	1	0	89	3	0	92	0	136	0	0	136	235
07:45 AM	4	0	5	0	9	0	0	0	0	0	0	104	4	0	108	0	148	0	0	148	265
Total	17	0	22	0	39	0	0	1	0	1	0	329	9	0	338	7	596	0	0	603	981
08:00 AM	1	0	10	0	11	0	0	0	0	0	0	159	3	0	162	3	148	0	0	151	324
08:15 AM	4	0	12	0	16	0	0	0	0	0	0	157	3	0	160	6	206	0	0	212	388
08:30 AM	3	0	5	0	8	0	0	0	0	0	0	147	2	0	149	6	225	0	0	231	388
08:45 AM	8	0	21	0	29	0	0	0	0	0	0	185	1	0	186	4	186	0	0	190	405
Total	16	0	48	0	64	0	0	0	0	0	0	648	9	0	657	19	765	0	0	784	1505
*** BREAK ***																					
04:00 PM	4	0	2	0	6	0	0	0	0	0	0	197	10	0	207	11	214	0	0	225	438
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	203	13	0	216	2	142	0	0	144	361
04:30 PM	1	0	0	0	1	0	0	0	0	0	0	207	12	0	219	1	116	0	0	117	337
04:45 PM	2	0	2	0	4	0	0	0	0	0	0	213	8	0	221	2	119	0	0	121	346
Total	7	0	5	0	12	0	0	0	0	0	0	820	43	0	863	16	591	0	0	607	1482
05:00 PM	7	0	3	0	10	0	0	0	0	0	0	209	12	0	221	1	117	0	0	118	349
05:15 PM	3	0	1	0	4	0	0	0	0	0	1	224	15	0	240	0	112	0	0	112	356
05:30 PM	8	0	5	0	13	0	0	1	0	1	0	243	17	0	260	2	115	0	0	117	391
05:45 PM	3	0	6	0	9	0	0	0	0	0	0	287	11	0	298	0	107	0	0	107	414
Total	21	0	15	0	36	0	0	1	0	1	1	963	55	0	1019	3	451	0	0	454	1510
Grand Total	61	0	90	0	151	0	0	2	0	2	1	2760	116	0	2877	45	2403	0	0	2448	5478
Apprch %	40.4	0	59.6	0		0	0	100	0		0	95.9	4	0		1.8	98.2	0	0		
Total %	1.1	0	1.6	0	2.8	0	0	0	0	0	0	50.4	2.1	0	52.5	0.8	43.9	0	0	44.7	

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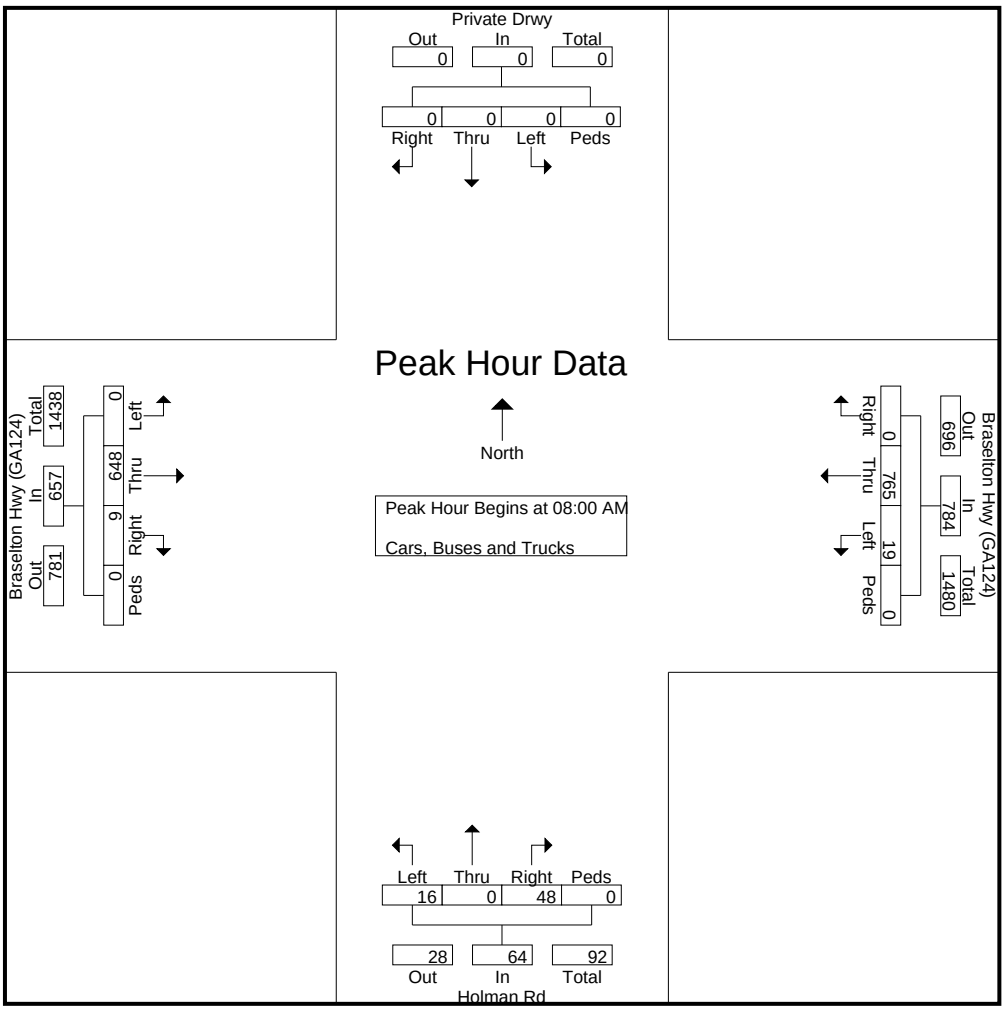
TMC Data
Braselton Hwy (GA124) @ Holman Rd

7-9am I 4-6pm

File Name : 42140002
Site Code : 42140002
Start Date : 5/22/2018
Page No : 2

	Holman Rd Northbound					Private Drwy Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	10	0	11	0	0	0	0	0	0	159	**3**	0	162	3	148	0	0	151	324
08:15 AM	4	0	12	0	16	0	0	0	0	0	0	157	3	0	160	**6**	206	0	0	212	388
08:30 AM	3	0	5	0	8	0	0	0	0	0	0	147	2	0	149	6	**225**	0	0	**231**	388
08:45 AM	**8**	0	**21**	0	**29**	0	0	0	0	0	0	**185**	1	0	**186**	4	186	0	0	190	**405**
Total Volume	16	0	48	0	64	0	0	0	0	0	0	648	9	0	657	19	765	0	0	784	1505
% App. Total	25	0	75	0		0	0	0	0		0	98.6	1.4	0		2.4	97.6	0	0		
PHF	.500	.000	.571	.000	.552	.000	.000	.000	.000	.000	.000	.876	.750	.000	.883	.792	.850	.000	.000	.848	.929



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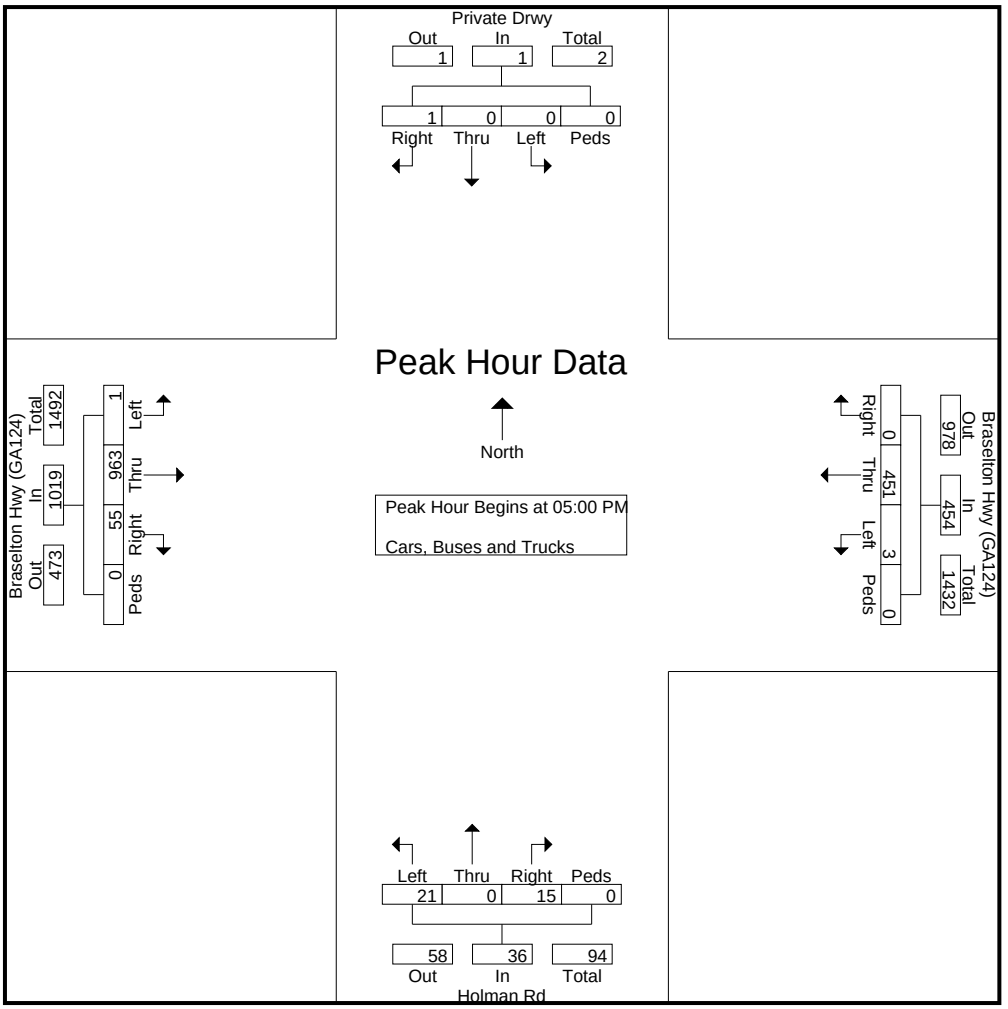
TMC Data
Braselton Hwy (GA124) @ Holman Rd

7-9am I 4-6pm

File Name : 42140002
Site Code : 42140002
Start Date : 5/22/2018
Page No : 3

	Holman Rd Northbound					Private Drwy Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	7	0	3	0	10	0	0	0	0	0	0	209	12	0	221	1	**117**	0	0	**118**	349
05:15 PM	3	0	1	0	4	0	0	0	0	0	**1**	224	15	0	240	0	112	0	0	112	356
05:30 PM	**8**	0	5	0	**13**	0	0	**1**	0	**1**	0	243	**17**	0	260	**2**	115	0	0	117	391
05:45 PM	3	0	**6**	0	9	0	0	0	0	0	0	**287**	11	0	**298**	0	107	0	0	107	**414**
Total Volume	21	0	15	0	36	0	0	1	0	1	1	963	55	0	1019	3	451	0	0	454	1510
% App. Total	58.3	0	41.7	0		0	0	100	0		0.1	94.5	5.4	0		0.7	99.3	0	0		
PHF	.656	.000	.625	.000	.692	.000	.000	.250	.000	.250	.250	.839	.809	.000	.855	.375	.964	.000	.000	.962	.912



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TMC Data
Braselton Hwy (GA124) @
Mill Creek High School Drwy (West)
7-9am I 4-6pm

File Name : 42140003
Site Code : 42140003
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Northbound					Mill Creek H S Drwy (West) Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	93	0	93	0	82	0	0	82	0	93	0	0	93	268
07:15 AM	0	0	0	0	0	0	0	14	0	14	0	65	0	0	65	0	100	1	0	101	180
07:30 AM	0	0	0	0	0	0	0	16	0	16	0	79	0	0	79	0	124	0	0	124	219
07:45 AM	0	0	0	0	0	0	0	18	0	18	0	114	0	0	114	0	133	0	0	133	265
Total	0	0	0	0	0	0	0	141	0	141	0	340	0	0	340	0	450	1	0	451	932
08:00 AM	0	0	0	0	0	0	0	18	0	18	0	181	0	0	181	0	128	0	0	128	327
08:15 AM	0	0	0	0	0	0	0	22	0	22	0	172	0	0	172	0	208	0	0	208	402
08:30 AM	0	0	0	0	0	0	0	29	0	29	0	163	0	0	163	0	189	0	0	189	381
08:45 AM	0	0	0	0	0	0	0	36	0	36	0	154	0	0	154	0	167	0	0	167	357
Total	0	0	0	0	0	0	0	105	0	105	0	670	0	0	670	0	692	0	0	692	1467
*** BREAK ***																					
04:00 PM	0	0	0	0	0	0	0	31	0	31	0	192	0	0	192	0	206	0	0	206	429
04:15 PM	0	0	0	0	0	0	0	4	0	4	0	197	0	0	197	0	133	0	0	133	334
04:30 PM	0	0	0	0	0	0	0	2	0	2	0	203	0	0	203	0	125	0	0	125	330
04:45 PM	0	0	0	0	0	0	0	2	0	2	0	207	0	0	207	0	117	0	0	117	326
Total	0	0	0	0	0	0	0	39	0	39	0	799	0	0	799	0	581	0	0	581	1419
05:00 PM	0	0	0	0	0	0	0	3	0	3	0	209	0	0	209	0	114	0	0	114	326
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	206	0	0	206	0	104	0	0	104	311
05:30 PM	0	0	0	0	0	0	0	2	0	2	0	243	0	0	243	0	108	0	0	108	353
05:45 PM	0	0	0	0	0	0	0	6	0	6	0	290	0	0	290	0	97	0	0	97	393
Total	0	0	0	0	0	0	0	12	0	12	0	948	0	0	948	0	423	0	0	423	1383
Grand Total	0	0	0	0	0	0	0	297	0	297	0	2757	0	0	2757	0	2146	1	0	2147	5201
Apprch %	0	0	0	0		0	0	100	0		0	100	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	5.7	0	5.7	0	53	0	0	53	0	41.3	0	0	41.3	

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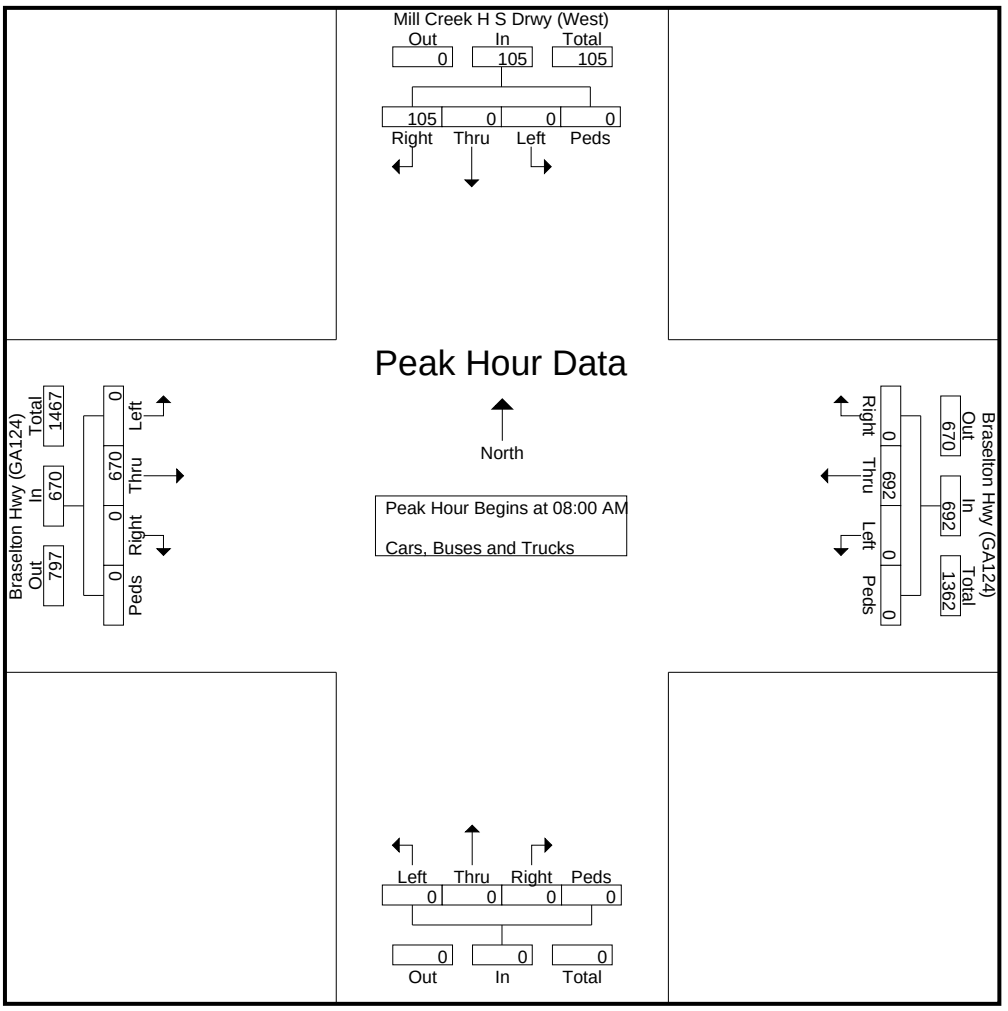
TMC Data
Braselton Hwy (GA124) @
Mill Creek High School Drwy (West)
7-9am I 4-6pm

File Name : 42140003
Site Code : 42140003
Start Date : 5/22/2018
Page No : 2

	Northbound					Mill Creek H S Drwy (West) Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	0	18	0	18	0	**181**	0	0	**181**	0	128	0	0	128	327
08:15 AM	0	0	0	0	0	0	0	22	0	22	0	172	0	0	172	0	**208**	0	0	**208**	**402**
08:30 AM	0	0	0	0	0	0	0	29	0	29	0	163	0	0	163	0	189	0	0	189	381
08:45 AM	0	0	0	0	0	0	0	**36**	0	**36**	0	154	0	0	154	0	167	0	0	167	357
Total Volume	0	0	0	0	0	0	0	105	0	105	0	670	0	0	670	0	692	0	0	692	1467
% App. Total	0	0	0	0		0	0	100	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.729	.000	.729	.000	.925	.000	.000	.925	.000	.832	.000	.000	.832	.912



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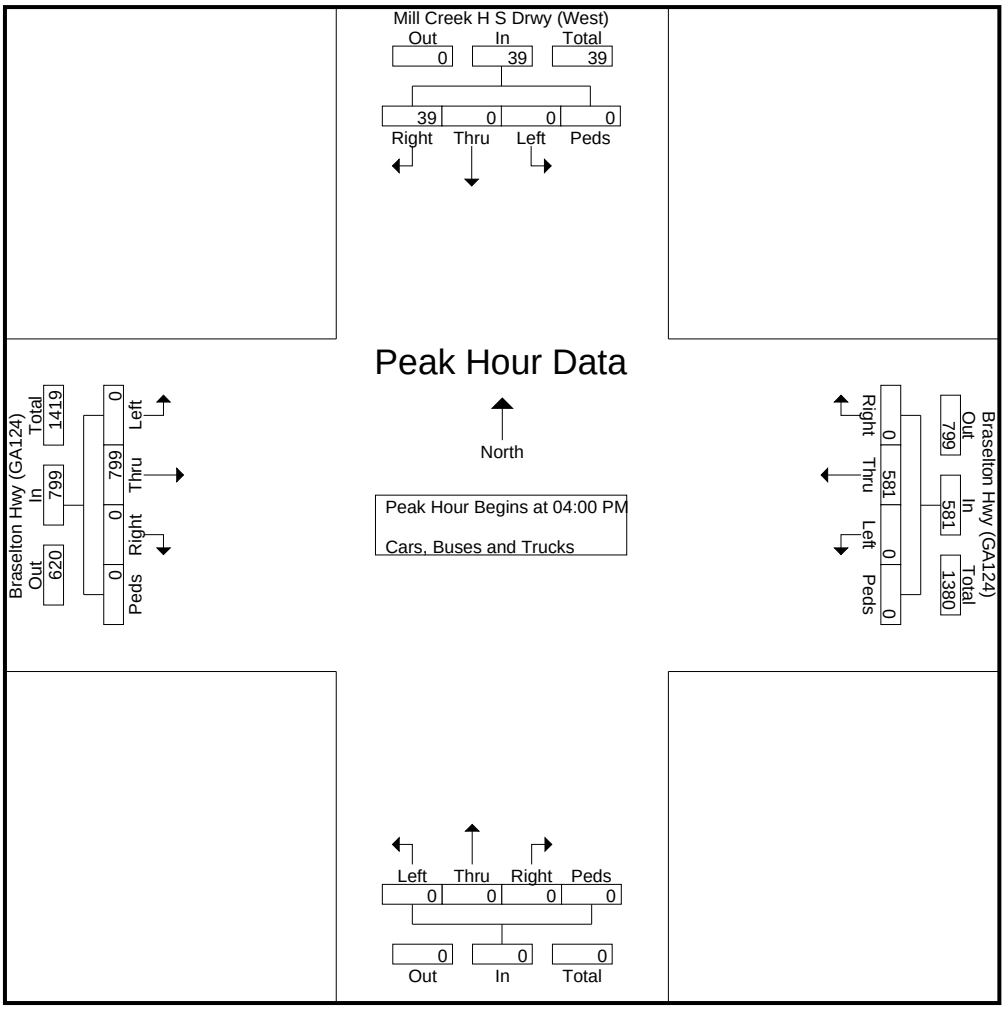
TMC Data
Braselton Hwy (GA124) @
Mill Creek High School Drwy (West)
7-9am I 4-6pm

File Name : 42140003
Site Code : 42140003
Start Date : 5/22/2018
Page No : 3

	Northbound					Mill Creek H S Drwy (West) Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	**31**	0	**31**	0	192	0	0	192	0	**206**	0	0	**206**	**429**
04:15 PM	0	0	0	0	0	0	0	4	0	4	0	197	0	0	197	0	133	0	0	133	334
04:30 PM	0	0	0	0	0	0	0	2	0	2	0	203	0	0	203	0	125	0	0	125	330
04:45 PM	0	0	0	0	0	0	0	2	0	2	0	**207**	0	0	**207**	0	117	0	0	117	326
Total Volume	0	0	0	0	0	0	0	39	0	39	0	799	0	0	799	0	581	0	0	581	1419
% App. Total	0	0	0	0		0	0	100	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.315	.000	.315	.000	.965	.000	.000	.965	.000	.705	.000	.000	.705	.827



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TMC Data
Braselton Hwy (GA124) @
Mill Creek High School Drwy (East)
7-9am I 4-6pm

File Name : 42140004
Site Code : 42140004
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Northbound					Mill Creek H S Drwy (East) Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	43	0	17	0	60	74	10	0	0	84	0	79	77	0	156	300
07:15 AM	0	0	0	0	0	7	0	3	0	10	24	44	0	0	68	0	96	9	0	105	183
07:30 AM	0	0	0	0	0	5	0	3	0	8	21	63	0	0	84	0	109	8	0	117	209
07:45 AM	0	0	0	0	0	3	0	9	0	12	45	72	0	0	117	0	117	15	0	132	261
Total	0	0	0	0	0	58	0	32	0	90	164	189	0	0	353	0	401	109	0	510	953
08:00 AM	0	0	0	0	0	14	0	19	0	33	63	114	0	0	177	0	108	22	0	130	340
08:15 AM	0	0	0	0	0	17	0	34	0	51	87	88	0	0	175	0	167	22	0	189	415
08:30 AM	0	0	0	0	0	19	0	36	0	55	86	76	0	0	162	0	142	34	0	176	393
08:45 AM	0	0	0	0	0	34	0	56	0	90	124	48	0	0	172	0	118	65	0	183	445
Total	0	0	0	0	0	84	0	145	0	229	360	326	0	0	686	0	535	143	0	678	1593
*** BREAK ***																					
04:00 PM	0	0	0	0	0	78	0	111	0	189	36	156	0	0	192	0	103	13	0	116	497
04:15 PM	0	0	0	0	0	35	0	41	0	76	17	180	0	0	197	0	87	10	0	97	370
04:30 PM	0	0	0	0	0	13	0	12	0	25	10	197	0	0	207	0	107	8	0	115	347
04:45 PM	0	0	0	0	0	8	0	22	0	30	9	208	0	0	217	0	115	11	0	126	373
Total	0	0	0	0	0	134	0	186	0	320	72	741	0	0	813	0	412	42	0	454	1587
05:00 PM	0	0	0	0	0	1	0	7	0	8	8	213	0	0	221	0	111	9	0	120	349
05:15 PM	0	0	0	0	0	1	0	4	0	5	15	196	0	0	211	0	102	13	0	115	331
05:30 PM	0	0	0	0	0	3	0	7	0	10	43	192	0	0	235	0	105	33	0	138	383
05:45 PM	0	0	0	0	0	0	0	2	0	2	105	187	0	0	292	0	96	40	0	136	430
Total	0	0	0	0	0	5	0	20	0	25	171	788	0	0	959	0	414	95	0	509	1493
Grand Total	0	0	0	0	0	281	0	383	0	664	767	2044	0	0	2811	0	1762	389	0	2151	5626
Apprch %	0	0	0	0		42.3	0	57.7	0		27.3	72.7	0	0		0	81.9	18.1	0		
Total %	0	0	0	0	0	5	0	6.8	0	11.8	13.6	36.3	0	0	50	0	31.3	6.9	0	38.2	

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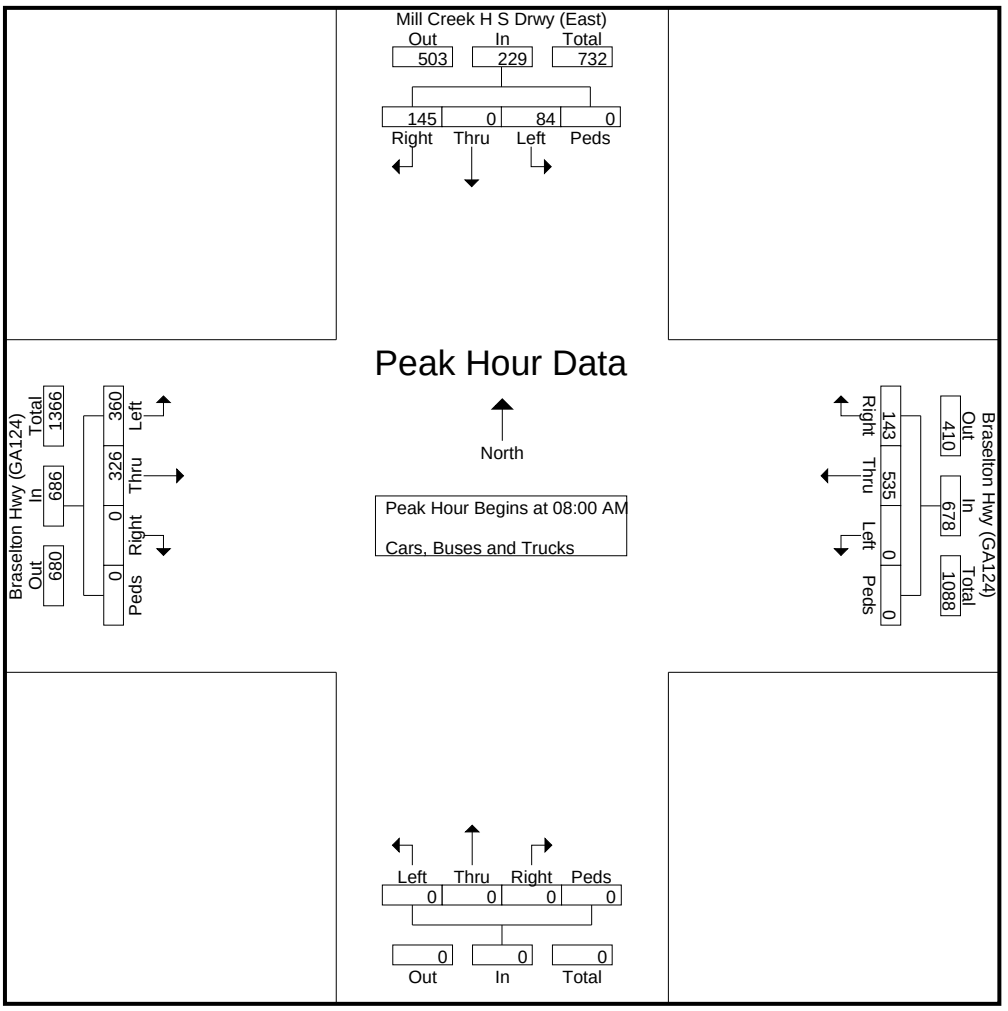
TMC Data
Braselton Hwy (GA124) @
Mill Creek High School Drwy (East)
7-9am I 4-6pm

File Name : 42140004
Site Code : 42140004
Start Date : 5/22/2018
Page No : 2

	Northbound					Mill Creek H S Drwy (East) Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	14	0	19	0	33	63	**114**	0	0	**177**	0	108	22	0	130	340
08:15 AM	0	0	0	0	0	17	0	34	0	51	87	88	0	0	175	0	**167**	22	0	**189**	415
08:30 AM	0	0	0	0	0	19	0	36	0	55	86	76	0	0	162	0	142	34	0	176	393
08:45 AM	0	0	0	0	0	**34**	0	**56**	0	**90**	**124**	48	0	0	172	0	118	**65**	0	183	**445**
Total Volume	0	0	0	0	0	84	0	145	0	229	360	326	0	0	686	0	535	143	0	678	1593
% App. Total	0	0	0	0		36.7	0	63.3	0		52.5	47.5	0	0		0	78.9	21.1	0		
PHF	.000	.000	.000	.000	.000	.618	.000	.647	.000	.636	.726	.715	.000	.000	.969	.000	.801	.550	.000	.897	.895



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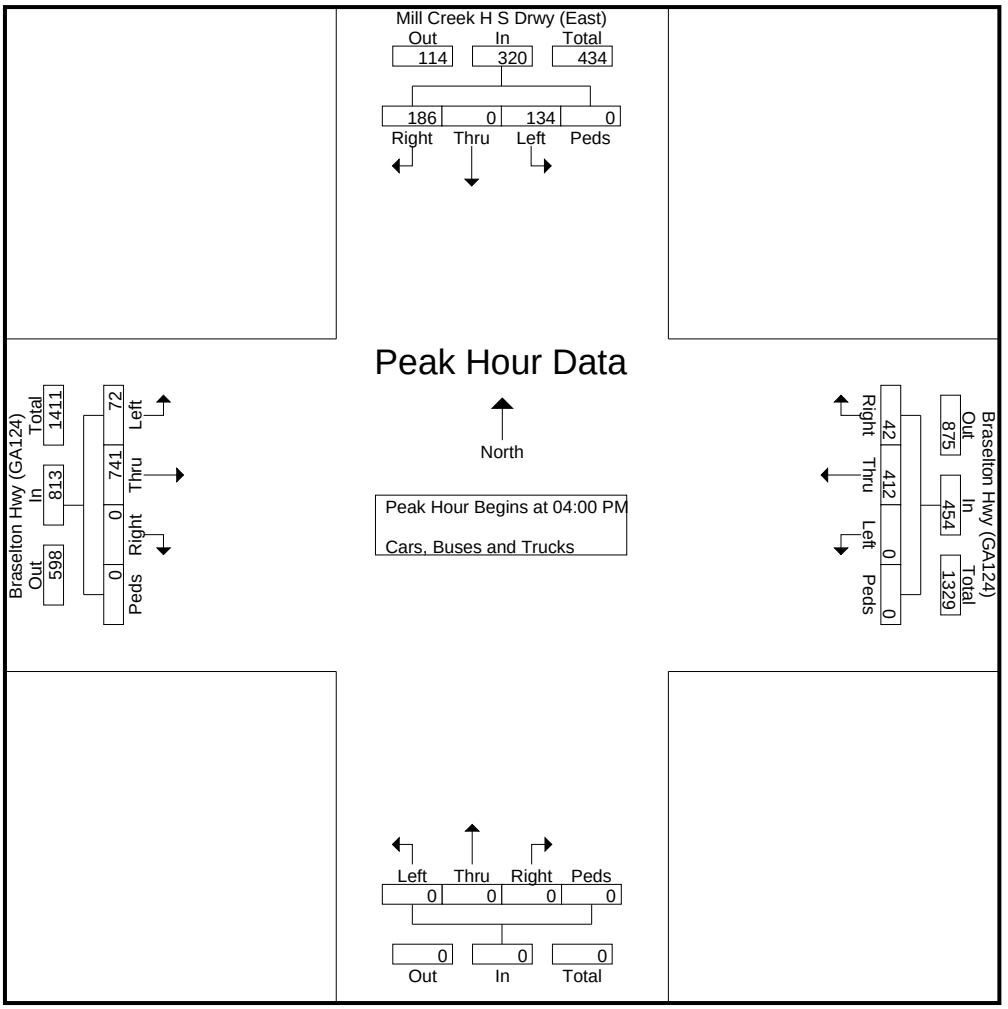
TMC Data
Braselton Hwy (GA124) @
Mill Creek High School Drwy (East)
7-9am I 4-6pm

File Name : 42140004
Site Code : 42140004
Start Date : 5/22/2018
Page No : 3

	Northbound					Mill Creek H S Drwy (East) Southbound					Braselton Hwy (GA124) Eastbound					Braselton Hwy (GA124) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	**78**	0	**111**	0	**189**	**36**	156	0	0	192	0	103	**13**	0	116	**497**
04:15 PM	0	0	0	0	0	35	0	41	0	76	17	180	0	0	197	0	87	10	0	97	370
04:30 PM	0	0	0	0	0	13	0	12	0	25	10	197	0	0	207	0	107	8	0	115	347
04:45 PM	0	0	0	0	0	8	0	22	0	30	9	**208**	0	0	**217**	0	**115**	11	0	**126**	373
Total Volume	0	0	0	0	0	134	0	186	0	320	72	741	0	0	813	0	412	42	0	454	1587
% App. Total	0	0	0	0		41.9	0	58.1	0		8.9	91.1	0	0		0	90.7	9.3	0		
PHF	.000	.000	.000	.000	.000	.429	.000	.419	.000	.423	.500	.891	.000	.000	.937	.000	.896	.808	.000	.901	.798



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TMC Data
Spout Springs Rd @
Doc Hughes Rd
7-9am I 4-6pm

File Name : 39110005
Site Code : 39110005
Start Date : 9/20/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Spout Springs Rd Northbound					Spout Springs Rd Southbound					Doc Hughes Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	41	60	0	0	101	0	81	28	0	109	4	0	17	0	21	0	0	0	0	0	231
07:15 AM	38	68	0	0	106	0	91	28	0	119	4	0	17	0	21	0	0	0	0	0	246
07:30 AM	30	70	0	0	100	0	86	20	0	106	0	0	23	0	23	0	0	0	0	0	229
07:45 AM	24	54	0	0	78	0	95	24	0	119	5	0	28	0	33	0	0	0	0	0	230
Total	133	252	0	0	385	0	353	100	0	453	13	0	85	0	98	0	0	0	0	0	936
08:00 AM	20	90	0	0	110	0	112	18	0	130	5	0	26	0	31	0	0	0	0	0	271
08:15 AM	35	87	0	0	122	0	92	24	0	116	2	0	16	0	18	0	0	0	0	0	256
08:30 AM	38	81	0	0	119	0	86	15	0	101	1	0	13	0	14	0	0	0	0	0	234
08:45 AM	17	85	0	0	102	0	80	18	0	98	2	0	19	0	21	0	0	0	0	0	221
Total	110	343	0	0	453	0	370	75	0	445	10	0	74	0	84	0	0	0	0	0	982
*** BREAK ***																					
04:00 PM	32	100	0	0	132	0	81	11	0	92	9	0	33	0	42	0	0	0	0	0	266
04:15 PM	38	115	0	0	153	0	82	16	0	98	8	0	45	0	53	0	0	0	0	0	304
04:30 PM	25	96	0	0	121	0	83	13	0	96	10	0	50	0	60	0	0	0	0	0	277
04:45 PM	27	115	0	0	142	0	92	9	0	101	22	0	62	0	84	0	0	0	0	0	327
Total	122	426	0	0	548	0	338	49	0	387	49	0	190	0	239	0	0	0	0	0	1174
05:00 PM	24	136	0	0	160	0	94	14	0	108	15	0	61	0	76	0	0	0	0	0	344
05:15 PM	23	117	0	0	140	0	99	26	0	125	15	0	62	0	77	0	0	0	0	0	342
05:30 PM	22	110	0	0	132	0	113	20	0	133	18	0	51	0	69	0	0	0	0	0	334
05:45 PM	31	99	0	0	130	0	110	21	0	131	26	0	72	0	98	0	0	0	0	0	359
Total	100	462	0	0	562	0	416	81	0	497	74	0	246	0	320	0	0	0	0	0	1379
Grand Total	465	1483	0	0	1948	0	1477	305	0	1782	146	0	595	0	741	0	0	0	0	0	4471
Apprch %	23.9	76.1	0	0		0	82.9	17.1	0		19.7	0	80.3	0		0	0	0	0		
Total %	10.4	33.2	0	0	43.6	0	33	6.8	0	39.9	3.3	0	13.3	0	16.6	0	0	0	0	0	

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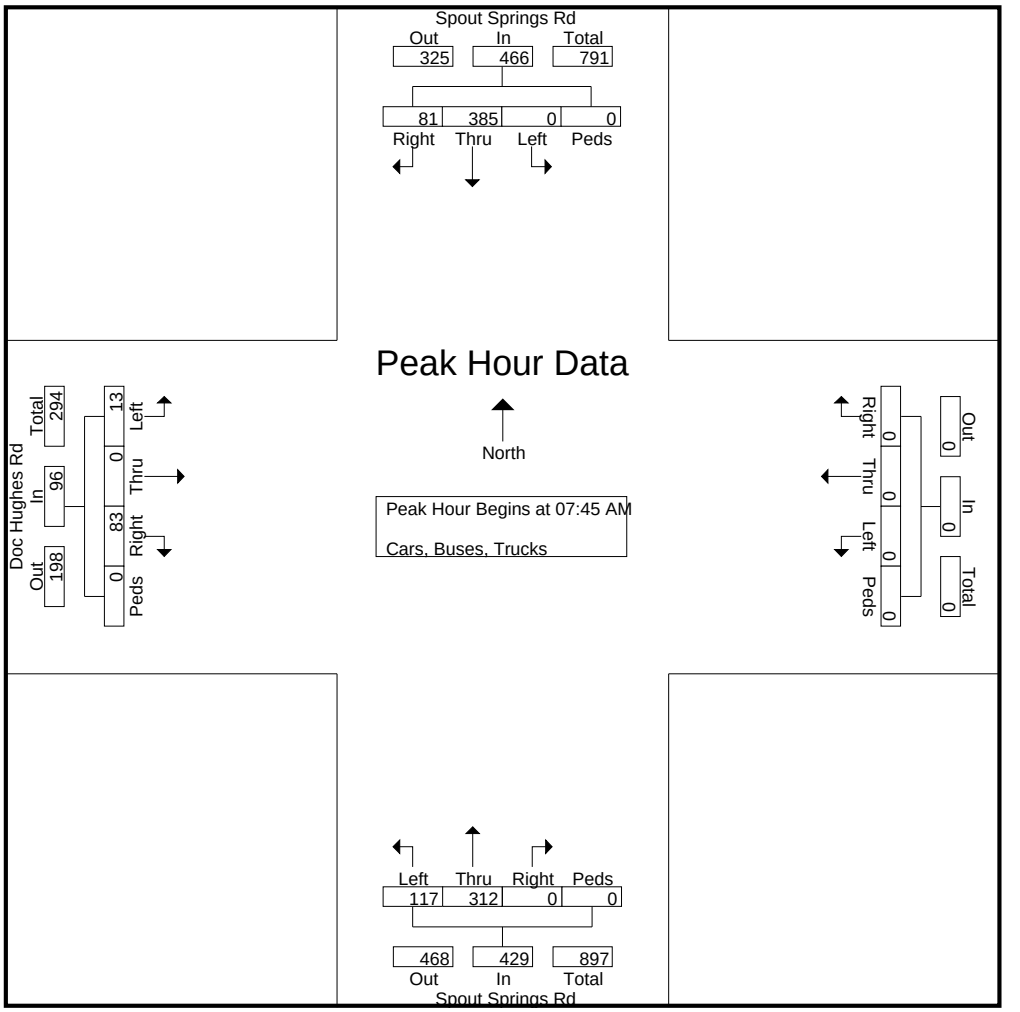
TMC Data
Spout Springs Rd @
Doc Hughes Rd
7-9am I 4-6pm

File Name : 39110005
Site Code : 39110005
Start Date : 9/20/2016

	Spout Springs Rd Northbound					Spout Springs Rd Southbound					Doc Hughes Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	24	54	0	0	78	0	95	**24**	0	119	**5**	0	**28**	0	**33**	0	0	0	0	0	230
08:00 AM	20	**90**	0	0	110	0	**112**	18	0	**130**	5	0	26	0	31	0	0	0	0	0	**271**
08:15 AM	35	87	0	0	**122**	0	92	24	0	116	2	0	16	0	18	0	0	0	0	0	256
08:30 AM	**38**	81	0	0	119	0	86	15	0	101	1	0	13	0	14	0	0	0	0	0	234
Total Volume	117	312	0	0	429	0	385	81	0	466	13	0	83	0	96	0	0	0	0	0	991
% App. Total	27.3	72.7	0	0		0	82.6	17.4	0		13.5	0	86.5	0		0	0	0	0		
PHF	.770	.867	.000	.000	.879	.000	.859	.844	.000	.896	.650	.000	.741	.000	.727	.000	.000	.000	.000	.000	.914



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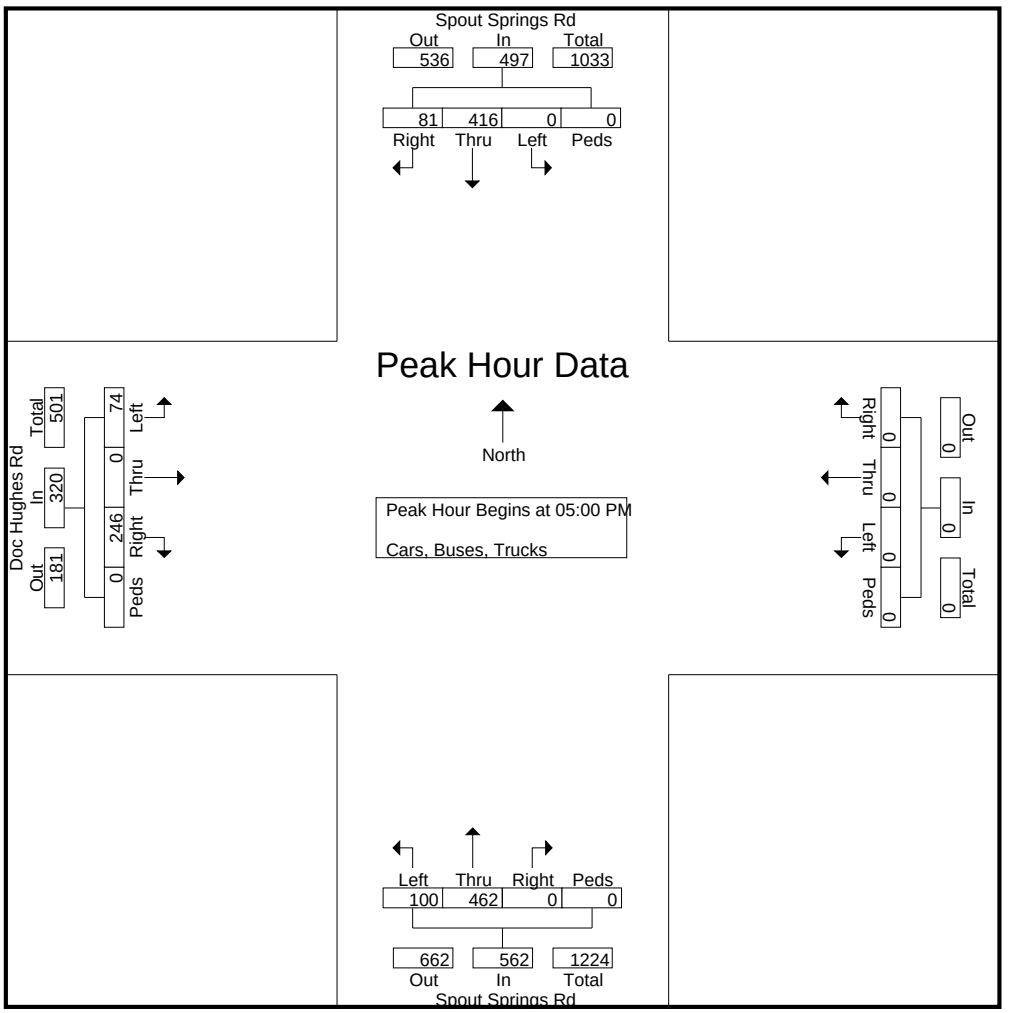
TMC Data
Spout Springs Rd @
Doc Hughes Rd
7-9am I 4-6pm

File Name : 39110005
Site Code : 39110005
Start Date : 9/20/2016
Page No : 3

	Spout Springs Rd Northbound					Spout Springs Rd Southbound					Doc Hughes Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	24	**136**	0	0	**160**	0	94	14	0	108	15	0	61	0	76	0	0	0	0	0	344
05:15 PM	23	117	0	0	140	0	99	**26**	0	125	15	0	62	0	77	0	0	0	0	0	342
05:30 PM	22	110	0	0	132	0	**113**	20	0	**133**	18	0	51	0	69	0	0	0	0	0	334
05:45 PM	**31**	99	0	0	130	0	110	21	0	131	**26**	0	**72**	0	**98**	0	0	0	0	0	**359**
Total Volume	100	462	0	0	562	0	416	81	0	497	74	0	246	0	320	0	0	0	0	0	1379
% App. Total	17.8	82.2	0	0		0	83.7	16.3	0		23.1	0	76.9	0		0	0	0	0		
PHF	.806	.849	.000	.000	.878	.000	.920	.779	.000	.934	.712	.000	.854	.000	.816	.000	.000	.000	.000	.000	.960



Reliable Traffic Data Services, LLC

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Classification Data

Site Code: 42140101
Braselton Hwy (GA124) East of Holman Rd

Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
05/22/1															
8	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
00:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	6	0	0	1	0	0	0	0	0	0	0	0	0	7
04:45	1	5	0	0	0	0	0	0	0	0	0	0	0	0	6
	1	12	0	0	1	0	0	0	0	0	0	0	0	0	14
05:00	0	7	2	0	1	0	0	0	0	0	0	0	0	0	10
05:15	0	6	3	0	0	0	0	0	1	0	0	0	0	0	10
05:30	1	10	4	1	0	0	0	0	0	0	0	0	0	0	16
05:45	0	16	2	0	1	0	0	0	1	0	0	0	0	0	20
	1	39	11	1	2	0	0	0	2	0	0	0	0	0	56
06:00	0	23	4	0	2	0	0	0	0	0	0	0	0	0	29
06:15	0	42	2	1	1	0	0	0	1	0	0	0	0	0	47
06:30	0	45	3	4	8	1	0	0	2	0	0	0	0	0	63
06:45	0	58	7	1	3	1	0	0	1	0	0	1	0	0	72
	0	168	16	6	14	2	0	0	4	0	0	1	0	0	211
07:00	0	77	17	2	1	0	0	0	3	0	0	0	0	0	100
07:15	0	63	7	0	1	0	0	0	1	0	0	0	0	0	72
07:30	0	57	13	1	3	0	0	0	3	0	0	0	0	0	77
07:45	0	72	13	0	7	0	0	3	0	0	0	0	0	0	95
	0	269	50	3	12	0	0	3	7	0	0	0	0	0	344
08:00	2	124	20	0	8	0	4	0	1	0	0	1	0	0	160
08:15	0	138	23	3	10	1	0	0	1	0	0	0	0	0	176
08:30	0	132	20	1	5	0	0	1	4	1	0	4	0	0	168
08:45	0	122	16	0	1	0	0	0	8	0	0	0	1	0	148
	2	516	79	4	24	1	4	1	14	1	0	5	1	0	652
09:00	1	94	9	0	1	0	0	0	3	0	0	0	0	0	108
09:15	0	72	6	0	0	1	1	0	1	0	0	0	0	0	81
09:30	0	58	9	0	0	3	0	0	3	0	0	0	0	0	73
09:45	1	51	6	0	0	3	0	0	0	0	0	0	0	0	61
	2	275	30	0	1	7	1	0	7	0	0	0	0	0	323
10:00	1	46	7	0	1	0	0	0	3	0	0	0	0	0	58
10:15	0	42	5	0	4	0	0	0	1	0	0	0	0	0	52
10:30	0	44	4	2	1	0	1	0	3	0	0	0	0	0	55
10:45	1	50	9	0	9	1	0	0	1	0	0	0	0	0	71
	2	182	25	2	15	1	1	0	8	0	0	0	0	0	236
11:00	1	52	11	6	0	0	0	0	1	0	0	0	0	0	71
11:15	0	64	15	2	1	0	0	0	3	0	0	0	0	0	85
11:30	0	76	12	1	3	0	0	0	4	0	0	0	0	0	96
11:45	0	84	17	0	6	1	0	0	4	0	0	0	0	0	112
	1	276	55	9	10	1	0	0	12	0	0	0	0	0	364
Total	9	1753	266	25	80	12	6	4	54	1	0	6	1	0	2217
Percent	0.4%	79.1%	12.0%	1.1%	3.6%	0.5%	0.3%	0.2%	2.4%	0.0%	0.0%	0.3%	0.0%	0.0%	

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Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	93	11	1	4	0	1	0	3	0	0	1	0	0	114
12:15	1	107	15	0	4	0	0	0	1	0	0	0	0	0	128
12:30	0	114	20	1	3	0	0	0	1	0	0	0	0	0	139
12:45	0	121	18	0	3	0	0	1	0	0	0	0	0	0	143
	1	435	64	2	14	0	1	1	5	0	0	1	0	0	524
13:00	1	126	14	0	3	0	0	0	1	0	0	0	0	0	145
13:15	1	121	20	0	7	0	0	0	0	0	0	0	0	0	149
13:30	0	123	21	0	4	0	0	1	1	0	0	0	0	0	150
13:45	1	128	25	0	1	0	0	1	0	0	0	0	0	0	156
	3	498	80	0	15	0	0	2	2	0	0	0	0	0	600
14:00	1	125	23	2	1	0	0	1	1	0	0	0	0	0	154
14:15	0	121	16	2	3	0	0	1	0	0	0	0	0	0	143
14:30	6	108	22	1	2	1	0	0	0	0	0	0	0	0	140
14:45	0	113	17	2	4	1	0	0	0	0	0	1	0	0	138
	7	467	78	7	10	2	0	2	1	0	0	1	0	0	575
15:00	2	116	24	1	4	0	0	0	3	0	0	0	0	0	150
15:15	0	123	16	0	7	0	0	0	1	0	0	0	0	0	147
15:30	1	156	36	0	3	1	0	0	1	0	0	0	0	0	198
15:45	0	178	36	0	3	0	0	0	0	0	0	0	0	0	217
	3	573	112	1	17	1	0	0	5	0	0	0	0	0	712
16:00	0	197	28	1	6	0	0	1	3	0	0	0	0	0	236
16:15	1	157	30	2	3	0	0	0	0	0	0	0	0	0	193
16:30	0	155	23	1	4	1	0	1	3	0	0	0	0	0	188
16:45	0	199	39	2	6	1	0	0	1	0	0	0	0	0	248
	1	708	120	6	19	2	0	2	7	0	0	0	0	0	865
17:00	0	220	18	1	3	1	0	0	0	0	0	0	0	0	243
17:15	0	211	39	0	3	0	0	0	0	0	0	0	0	0	253
17:30	0	216	36	0	2	0	0	2	0	0	0	0	0	0	256
17:45	0	229	31	0	2	0	0	1	1	0	0	0	0	0	264
	0	876	124	1	10	1	0	3	1	0	0	0	0	0	1016
18:00	1	207	25	0	4	0	0	0	3	0	0	0	0	0	240
18:15	0	191	27	1	4	0	0	0	3	0	0	0	0	0	226
18:30	1	128	24	0	4	0	0	1	0	0	0	0	0	0	158
18:45	1	123	16	0	0	1	0	1	1	0	0	0	0	0	143
	3	649	92	1	12	1	0	2	7	0	0	0	0	0	767
19:00	0	110	19	0	0	0	0	3	1	0	0	0	0	0	133
19:15	0	106	20	1	1	0	0	3	1	0	0	0	0	0	132
19:30	0	96	17	1	1	0	0	0	0	0	0	0	0	0	115
19:45	0	74	12	0	3	1	0	0	6	0	0	0	0	0	96
	0	386	68	2	5	1	0	6	8	0	0	0	0	0	476
20:00	0	67	15	0	0	0	0	0	0	0	0	0	0	0	82
20:15	0	64	12	0	0	0	0	0	1	0	0	0	0	0	77
20:30	0	61	10	0	1	0	0	0	0	0	0	0	0	0	72
20:45	1	52	12	0	6	0	0	0	0	0	0	0	0	0	71
	1	244	49	0	7	0	0	0	1	0	0	0	0	0	302
21:00	0	56	8	0	0	0	0	0	0	0	0	0	0	0	64
21:15	0	47	9	0	3	0	0	0	0	0	0	0	0	0	59
21:30	0	38	7	0	3	0	0	0	0	0	0	0	0	0	48
21:45	0	41	4	0	4	0	0	0	0	0	0	0	0	0	49
	0	182	28	0	10	0	0	0	0	0	0	0	0	0	220
22:00	0	32	4	0	0	0	0	0	1	0	0	0	0	0	37
22:15	0	23	3	0	0	0	0	1	0	0	0	0	0	0	27
22:30	0	26	2	0	0	0	0	0	0	0	0	0	0	0	28
22:45	0	22	3	0	0	0	0	0	1	0	0	0	0	0	26
	0	103	12	0	0	0	0	1	2	0	0	0	0	0	118
23:00	0	18	1	0	0	0	0	0	0	0	0	0	0	0	19
23:15	0	16	0	0	0	0	0	0	0	0	0	0	0	0	16
23:30	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
23:45	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
	0	54	3	0	0	0	0	0	0	0	0	0	0	0	57
Total	19	5175	830	20	119	8	1	19	39	0	0	2	0	0	6232
Percent	0.3%	83.0%	13.3%	0.3%	1.9%	0.1%	0.0%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	28	6928	1096	45	199	20	7	23	93	1	0	8	1	0	8449
Percent	0.3%	82.0%	13.0%	0.5%	2.4%	0.2%	0.1%	0.3%	1.1%	0.0%	0.0%	0.1%	0.0%	0.0%	

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Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
05/22/1															
8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
00:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:15	0	4	0	0	1	0	0	0	0	0	0	0	0	0	5
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	8	0	0	1	0	0	0	0	0	0	0	0	0	9
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	10	0	0	1	0	0	0	0	0	0	0	0	0	11
04:45	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
	0	17	1	0	1	0	0	0	0	0	0	0	0	0	19
05:00	0	12	4	0	1	0	0	0	0	0	0	0	0	0	17
05:15	0	10	10	0	1	0	0	0	1	0	0	0	0	0	22
05:30	0	24	6	1	1	0	0	0	0	0	0	0	0	0	32
05:45	0	24	12	0	4	0	0	0	1	0	0	0	0	0	41
	0	70	32	1	7	0	0	0	2	0	0	0	0	0	112
06:00	1	36	8	0	3	0	0	0	1	0	0	0	0	0	49
06:15	1	69	9	1	1	0	0	0	1	0	0	0	0	0	82
06:30	0	75	11	0	2	1	0	0	4	0	0	0	0	0	93
06:45	1	96	15	1	5	1	0	0	1	0	0	1	0	0	121
	3	276	43	2	11	2	0	0	7	0	0	1	0	0	345
07:00	1	107	22	2	1	0	0	0	2	0	0	0	0	0	135
07:15	0	119	25	0	1	0	0	0	1	0	0	0	0	0	146
07:30	1	124	21	1	4	0	0	0	4	0	0	0	0	0	155
07:45	1	127	21	0	3	0	0	4	0	0	0	0	0	0	156
	3	477	89	3	9	0	0	4	7	0	0	0	0	0	592
08:00	2	151	12	0	5	0	5	0	2	0	0	2	0	0	179
08:15	0	161	27	3	4	2	0	0	2	0	0	0	0	0	199
08:30	1	167	36	2	3	0	0	2	5	2	0	5	0	0	223
08:45	2	137	30	0	2	0	0	0	9	0	0	0	2	0	182
	5	616	105	5	14	2	5	2	18	2	0	7	2	0	783
09:00	1	118	12	0	3	0	0	0	0	0	0	0	1	0	135
09:15	1	115	8	2	0	0	0	1	4	0	0	4	0	0	135
09:30	1	113	13	1	5	1	0	1	0	0	0	0	0	0	135
09:45	0	107	28	4	2	0	0	0	1	0	0	0	0	0	142
	3	453	61	7	10	1	0	2	5	0	0	4	1	0	547
10:00	0	90	37	1	2	0	0	0	0	0	0	0	0	0	130
10:15	1	76	20	1	5	0	0	0	0	0	0	0	0	0	103
10:30	0	92	14	0	5	0	0	0	0	0	0	0	0	0	111
10:45	0	83	22	0	4	0	0	0	0	0	0	0	0	0	109
	1	341	93	2	16	0	0	0	0	0	0	0	0	0	453
11:00	0	75	8	3	5	0	0	0	0	0	0	0	0	0	91
11:15	0	90	18	0	6	0	0	0	0	0	0	0	0	0	114
11:30	0	97	20	0	4	0	0	0	1	0	0	0	0	0	122
11:45	0	95	21	2	3	1	0	0	3	0	0	1	1	0	127
	0	357	67	5	18	1	0	0	4	0	0	1	1	0	454
Total	15	2638	492	25	87	6	5	8	43	2	0	13	4	0	3338
Percent	0.4%	79.0%	14.7%	0.7%	2.6%	0.2%	0.1%	0.2%	1.3%	0.1%	0.0%	0.4%	0.1%	0.0%	

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Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	1	107	23	1	3	0	0	0	0	1	0	0	0	0	136
12:15	0	115	25	0	4	0	0	1	3	0	0	0	0	0	148
12:30	1	112	22	0	6	0	1	1	0	0	0	0	0	0	143
12:45	0	117	17	0	6	0	0	0	0	0	0	0	0	0	140
	2	451	87	1	19	0	1	2	3	1	0	0	0	0	567
13:00	1	112	18	0	8	0	0	0	1	0	0	0	0	0	140
13:15	0	114	20	0	3	0	0	0	0	0	0	0	0	0	137
13:30	0	107	19	1	5	3	0	0	1	0	0	0	0	0	136
13:45	0	102	22	0	5	0	0	0	0	0	0	0	0	0	129
	1	435	79	1	21	3	0	0	2	0	0	0	0	0	542
14:00	0	96	18	3	13	1	0	3	0	0	0	0	0	0	134
14:15	0	99	15	4	6	1	0	0	0	0	0	0	0	0	125
14:30	0	102	10	0	6	0	0	0	0	0	0	0	0	0	118
14:45	0	96	13	1	4	0	0	0	0	0	0	0	0	0	114
	0	393	56	8	29	2	0	3	0	0	0	0	0	0	491
15:00	0	102	12	0	3	0	0	0	0	0	0	0	0	0	117
15:15	0	107	10	0	5	0	0	1	0	0	0	0	0	0	123
15:30	0	112	15	1	3	1	0	0	0	0	0	0	0	0	132
15:45	0	117	18	2	9	1	0	1	1	0	0	0	0	0	149
	0	438	55	3	20	2	0	2	1	0	0	0	0	0	521
16:00	1	120	21	1	10	1	0	0	1	0	0	0	1	0	156
16:15	0	115	18	2	0	1	0	3	3	1	3	0	0	0	146
16:30	0	118	19	0	3	0	0	0	0	0	0	0	0	0	140
16:45	0	113	18	0	8	0	0	0	0	0	0	0	0	0	139
	1	466	76	3	21	2	0	3	4	1	3	0	1	0	581
17:00	0	97	15	1	4	0	0	1	0	0	0	0	0	0	118
17:15	0	88	18	0	4	0	0	3	0	0	0	0	0	0	113
17:30	0	83	20	0	6	3	0	0	1	0	0	0	0	0	113
17:45	0	81	17	0	3	1	0	0	1	0	0	0	0	0	103
	0	349	70	1	17	4	0	4	2	0	0	0	0	0	447
18:00	0	89	14	0	6	1	0	0	1	0	0	0	0	0	111
18:15	0	109	13	0	4	0	0	0	0	0	0	0	0	0	126
18:30	1	139	23	0	0	0	0	0	1	0	0	0	0	0	164
18:45	0	87	12	0	3	0	0	0	0	0	0	0	0	0	102
	1	424	62	0	13	1	0	0	2	0	0	0	0	0	503
19:00	0	91	18	0	2	0	0	0	0	0	0	0	0	0	111
19:15	0	84	17	0	0	0	0	0	0	0	0	0	0	0	101
19:30	0	73	19	0	2	1	1	0	1	1	0	1	0	0	99
19:45	0	62	18	0	1	1	0	0	0	1	0	0	3	0	86
	0	310	72	0	5	2	1	0	1	2	0	1	3	0	397
20:00	0	53	12	1	1	0	0	0	1	0	0	0	0	0	68
20:15	0	44	12	0	0	0	0	1	0	0	0	0	0	0	57
20:30	0	42	6	0	2	0	0	0	1	0	0	0	0	0	51
20:45	0	35	5	0	1	0	0	0	0	0	0	0	0	0	41
	0	174	35	1	4	0	0	1	2	0	0	0	0	0	217
21:00	0	40	6	0	0	0	0	0	0	0	0	0	0	0	46
21:15	0	33	4	0	1	0	0	0	0	0	0	0	0	0	38
21:30	0	29	10	0	0	0	0	0	0	0	0	0	0	0	39
21:45	0	26	6	0	1	0	0	0	0	0	0	0	0	0	33
	0	128	26	0	2	0	0	0	0	0	0	0	0	0	156
22:00	0	29	4	0	1	0	0	0	0	0	0	0	0	0	34
22:15	0	28	3	0	4	0	0	0	0	0	0	0	0	0	35
22:30	0	17	3	0	1	0	0	0	0	0	0	0	0	0	21
22:45	0	15	3	0	0	0	0	0	0	0	0	0	0	0	18
	0	89	13	0	6	0	0	0	0	0	0	0	0	0	108
23:00	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
23:15	0	13	1	0	0	0	0	0	0	0	0	0	0	0	14
23:30	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
23:45	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13
	0	50	2	0	0	0	0	0	0	0	0	0	0	0	52
Total	5	3707	633	18	157	16	2	15	17	4	3	1	4	0	4582
Percent	0.1%	80.9%	13.8%	0.4%	3.4%	0.3%	0.0%	0.3%	0.4%	0.1%	0.1%	0.0%	0.1%	0.0%	
Grand Total	20	6345	1125	43	244	22	7	23	60	6	3	14	8	0	7920
Percent	0.3%	80.1%	14.2%	0.5%	3.1%	0.3%	0.1%	0.3%	0.8%	0.1%	0.0%	0.2%	0.1%	0.0%	

Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board's *Highway Capacity Manual*, 2016 edition (HCM 6). Synchro 10 software, which emulates the HCM 6 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and roundabouts and stop-sign controlled (unsignalized) intersections. Levels of service (LOS) are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay.

Signalized Intersections and Roundabouts – Level of service for a signalized intersection and a roundabout is defined in terms of control delay per vehicle. For signalized intersections and roundabouts, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections and roundabouts than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals/roundabouts, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections and roundabouts are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections and Roundabouts

Control Delay (s/veh)	LOS
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

Source: Highway Capacity Manual 6

Unsignalized Intersections – Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream. The level of service criteria for unsignalized intersections are presented in Table B.

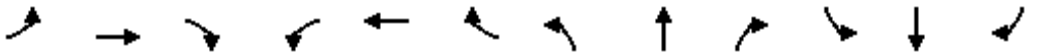
Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	LOS
0 – 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Source: Highway Capacity Manual 6

Appendix C

Existing Intersection Operational Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	338	44	48	355	722	78	355	109	498	260	253
Future Volume (veh/h)	415	338	44	48	355	722	78	355	109	498	260	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	472	384	50	49	366	744	92	418	128	530	277	269
Peak Hour Factor	0.88	0.88	0.88	0.97	0.97	0.97	0.85	0.85	0.85	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	538	478	62	493	430	1118	392	581	492	590	826	689
Arrive On Green	0.16	0.15	0.15	0.24	0.23	0.23	0.04	0.31	0.31	0.17	0.44	0.44
Sat Flow, veh/h	3401	3114	403	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	472	214	220	49	366	744	92	418	128	530	277	269
Grp Sat Flow(s),veh/h/ln	1700	1749	1768	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	19.7	17.2	17.4	0.0	27.6	18.4	5.1	28.8	5.0	22.1	14.1	10.2
Cycle Q Clear(g_c), s	19.7	17.2	17.4	0.0	27.6	18.4	5.1	28.8	5.0	22.1	14.1	10.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	538	269	272	493	430	1118	392	581	492	590	826	689
V/C Ratio(X)	0.88	0.80	0.81	0.10	0.85	0.67	0.23	0.72	0.26	0.90	0.34	0.39
Avail Cap(c_a), veh/h	739	803	812	493	514	1243	392	581	492	692	826	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	59.2	59.3	41.5	53.2	15.2	32.0	44.4	11.9	58.7	26.5	10.0
Incr Delay (d2), s/veh	8.9	5.4	5.7	0.1	11.2	1.2	0.3	7.5	1.3	13.2	1.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	8.0	8.3	1.4	14.1	5.7	2.3	14.6	3.5	10.6	6.6	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	64.6	65.0	41.6	64.4	16.3	32.3	51.9	13.2	71.9	27.6	11.7
LnGrp LOS	E	E	E	D	E	B	C	D	B	E	C	B
Approach Vol, veh/h		906			1159			638			1076	
Approach Delay, s/veh		66.7			32.6			41.3			45.4	
Approach LOS		E			C			D			D	

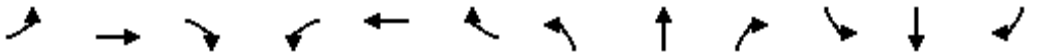
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.7	49.5	39.0	26.8	10.6	68.6	27.5	38.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	29.5	25.5	5.4	66.6	6.1	48.9	31.5	40.5
Max Q Clear Time (g_c+I1), s	24.1	30.8	2.0	19.4	7.1	16.1	21.7	29.6
Green Ext Time (p_c), s	1.0	0.0	0.0	2.9	0.0	2.7	1.3	4.3

Intersection Summary	
HCM 6th Ctrl Delay	45.9
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	633	73	52	1010	103	83
Future Volume (veh/h)	633	73	52	1010	103	83
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1826	1870	1870
Adj Flow Rate, veh/h	745	86	58	1135	136	109
Peak Hour Factor	0.85	0.85	0.89	0.89	0.76	0.76
Percent Heavy Veh, %	5	5	2	5	2	2
Cap, veh/h	1466	169	304	1623	714	636
Arrive On Green	0.47	0.47	0.47	0.47	0.40	0.40
Sat Flow, veh/h	3225	362	660	3561	1781	1585
Grp Volume(v), veh/h	412	419	58	1135	136	109
Grp Sat Flow(s),veh/h/ln	1735	1761	660	1735	1781	1585
Q Serve(g_s), s	11.4	11.4	4.6	17.7	3.4	3.0
Cycle Q Clear(g_c), s	11.4	11.4	16.0	17.7	3.4	3.0
Prop In Lane		0.21	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	812	824	304	1623	714	636
V/C Ratio(X)	0.51	0.51	0.19	0.70	0.19	0.17
Avail Cap(c_a), veh/h	1732	1759	655	3465	714	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	12.7	18.3	14.4	13.3	13.2
Incr Delay (d2), s/veh	0.5	0.5	0.3	0.6	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.1	0.7	6.2	1.4	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.2	13.2	18.6	15.0	13.9	13.8
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	831			1193	245	
Approach Delay, s/veh	13.2			15.2	13.9	
Approach LOS	B			B	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	32.0	36.6	36.6
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	27.5	68.5	68.5
Max Q Clear Time (g_c+I1), s	5.4	13.4	19.7
Green Ext Time (p_c), s	0.7	6.5	12.3

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	510	73	76	923	10	159	15	85	7	0	17
Future Volume (veh/h)	25	510	73	76	923	10	159	15	85	7	0	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	593	85	83	1003	11	241	23	129	12	0	29
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.66	0.66	0.66	0.58	0.58	0.58
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	176	1045	907	437	1079	937	387	449	381	360	0	381
Arrive On Green	0.03	0.57	0.57	0.05	0.59	0.59	0.24	0.24	0.24	0.24	0.00	0.24
Sat Flow, veh/h	1781	1826	1585	1781	1826	1585	1381	1870	1585	1235	0	1585
Grp Volume(v), veh/h	29	593	85	83	1003	11	241	23	129	12	0	29
Grp Sat Flow(s),veh/h/ln	1781	1826	1585	1781	1826	1585	1381	1870	1585	1235	0	1585
Q Serve(g_s), s	0.6	19.7	2.3	1.8	47.8	0.3	15.7	0.9	6.4	0.7	0.0	1.4
Cycle Q Clear(g_c), s	0.6	19.7	2.3	1.8	47.8	0.3	17.0	0.9	6.4	1.6	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	1045	907	437	1079	937	387	449	381	360	0	381
V/C Ratio(X)	0.16	0.57	0.09	0.19	0.93	0.01	0.62	0.05	0.34	0.03	0.00	0.08
Avail Cap(c_a), veh/h	219	1209	1049	449	1211	1051	387	449	381	360	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	13.0	9.3	9.6	17.8	8.1	34.8	28.0	30.1	28.6	0.0	28.2
Incr Delay (d2), s/veh	0.4	0.5	0.0	0.2	11.8	0.0	7.3	0.2	2.4	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.6	0.8	0.7	21.3	0.1	6.0	0.4	2.7	0.2	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	13.5	9.3	9.8	29.6	8.1	42.1	28.2	32.5	28.8	0.0	28.6
LnGrp LOS	B	B	A	A	C	A	D	C	C	C	A	C
Approach Vol, veh/h		707			1097			393			41	
Approach Delay, s/veh		13.2			27.8			38.1			28.6	
Approach LOS		B			C			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.5	9.0	59.3		27.5	7.2	61.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		23.0	5.1	63.4		23.0	5.0	63.5				
Max Q Clear Time (g_c+I1), s		19.0	3.8	21.7		3.6	2.6	49.8				
Green Ext Time (p_c), s		0.5	0.0	4.9		0.1	0.0	6.8				

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	543	15	18	969	43	28
Future Vol, veh/h	543	15	18	969	43	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	94	94	90	90
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	662	18	19	1031	48	31

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	680	0	1731	662
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	1069	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	912	-	97	462
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	330	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	912	-	92	462
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	330	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	53.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	92	462	-	-	912	-
HCM Lane V/C Ratio	0.519	0.067	-	-	0.021	-
HCM Control Delay (s)	80.3	13.4	-	-	9	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	2.3	0.2	-	-	0.1	-

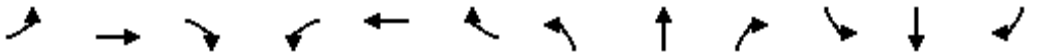
Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	648	9	19	765	16	48
Future Vol, veh/h	648	9	19	765	16	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	85	85	55	55
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	736	10	22	900	29	87

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	746	0	1685	741
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	944	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	862	-	103	416
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	378	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	862	-	100	416
Mov Cap-2 Maneuver	-	-	-	-	100	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	378	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	35.2
HCM LOS			E

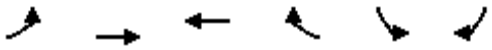
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	232	-	-	862	-
HCM Lane V/C Ratio	0.502	-	-	0.026	-
HCM Control Delay (s)	35.2	-	-	9.3	-
HCM Lane LOS	E	-	-	A	-
HCM 95th %tile Q(veh)	2.6	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	435	23	54	592	157	81	106	76	176	105	353
Future Volume (veh/h)	207	435	23	54	592	157	81	106	76	176	105	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1870	1870	1826	1856	1870	1870	1870	1870	1870	1841
Adj Flow Rate, veh/h	218	458	24	57	630	167	87	114	82	183	109	368
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93	0.96	0.96	0.96
Percent Heavy Veh, %	4	5	2	2	5	3	2	2	2	2	2	4
Cap, veh/h	288	973	844	421	713	614	376	227	164	400	503	420
Arrive On Green	0.09	0.53	0.53	0.39	0.39	0.39	0.05	0.22	0.22	0.10	0.27	0.27
Sat Flow, veh/h	1753	1826	1585	913	1826	1572	1781	1012	728	1781	1870	1560
Grp Volume(v), veh/h	218	458	24	57	630	167	87	0	196	183	109	368
Grp Sat Flow(s),veh/h/ln	1753	1826	1585	913	1826	1572	1781	0	1739	1781	1870	1560
Q Serve(g_s), s	6.5	14.5	0.7	3.8	29.7	6.7	3.4	0.0	9.1	7.0	4.2	20.9
Cycle Q Clear(g_c), s	6.5	14.5	0.7	5.2	29.7	6.7	3.4	0.0	9.1	7.0	4.2	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	288	973	844	421	713	614	376	0	391	400	503	420
V/C Ratio(X)	0.76	0.47	0.03	0.14	0.88	0.27	0.23	0.00	0.50	0.46	0.22	0.88
Avail Cap(c_a), veh/h	342	1213	1053	513	898	773	381	0	391	410	503	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	13.5	10.3	19.2	26.2	19.2	25.4	0.0	31.3	23.3	26.3	32.4
Incr Delay (d2), s/veh	7.8	0.4	0.0	0.1	8.7	0.2	0.3	0.0	4.5	0.8	1.0	21.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	5.7	0.2	0.8	14.0	2.4	1.5	0.0	4.3	3.0	2.0	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	13.8	10.3	19.4	34.9	19.5	25.7	0.0	35.9	24.1	27.2	54.3
LnGrp LOS	C	B	B	B	C	B	C	A	D	C	C	D
Approach Vol, veh/h		700			854			283			660	
Approach Delay, s/veh		18.1			30.9			32.8			41.4	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	25.3		53.8	9.4	29.4	13.1	40.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	20.5		61.5	5.1	24.9	11.5	45.5				
Max Q Clear Time (g_c+I1), s	9.0	11.1		16.5	5.4	22.9	8.5	31.7				
Green Ext Time (p_c), s	0.0	0.7		3.4	0.0	0.4	0.2	4.5				

Intersection Summary												
HCM 6th Ctrl Delay			30.3									
HCM 6th LOS			C									



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	360	326	535	143	84	145
Future Volume (veh/h)	360	326	535	143	84	145
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1604	1826	1826	1604	1604	1604
Adj Flow Rate, veh/h	371	336	594	159	131	227
Peak Hour Factor	0.97	0.97	0.90	0.90	0.64	0.64
Percent Heavy Veh, %	20	5	5	20	20	20
Cap, veh/h	416	1129	698	519	405	360
Arrive On Green	0.18	0.62	0.38	0.38	0.27	0.27
Sat Flow, veh/h	1527	1826	1826	1359	1527	1359
Grp Volume(v), veh/h	371	336	594	159	131	227
Grp Sat Flow(s),veh/h/ln	1527	1826	1826	1359	1527	1359
Q Serve(g_s), s	10.7	6.7	23.0	6.3	5.3	11.4
Cycle Q Clear(g_c), s	10.7	6.7	23.0	6.3	5.3	11.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	416	1129	698	519	405	360
V/C Ratio(X)	0.89	0.30	0.85	0.31	0.32	0.63
Avail Cap(c_a), veh/h	668	1784	1051	782	405	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	6.9	21.9	16.7	22.8	25.0
Incr Delay (d2), s/veh	9.1	0.1	4.4	0.3	2.1	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.2	10.0	1.9	2.1	9.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.6	7.0	26.3	17.0	24.9	33.1
LnGrp LOS	C	A	C	B	C	C
Approach Vol, veh/h		707	753		358	
Approach Delay, s/veh		16.3	24.3		30.1	
Approach LOS		B	C		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			52.3		25.0	18.2	34.0
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			75.5		20.5	26.5	44.5
Max Q Clear Time (g_c+I1), s			8.7		13.4	12.7	25.0
Green Ext Time (p_c), s			2.3		0.7	1.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	670	692	0	0	105
Future Vol, veh/h	0	670	692	0	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	93	83	83	92	73
Heavy Vehicles, %	2	5	5	2	2	20
Mvmt Flow	0	720	834	0	0	144

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	834
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.48
Pot Cap-1 Maneuver	0	-	-	0	0	342
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	342
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	342
HCM Lane V/C Ratio	-	-	0.421
HCM Control Delay (s)	-	-	23
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	396	13	7	573	26	47	3	16	17	2	58
Future Vol, veh/h	62	396	13	7	573	26	47	3	16	17	2	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	120	150	-	300	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	90	90	90	85	85	85	70	70	70
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	64	408	13	8	637	29	55	4	19	24	3	83

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	666	0	0	421	0	0	1247	1218	408	1207	1202	637
Stage 1	-	-	-	-	-	-	536	536	-	653	653	-
Stage 2	-	-	-	-	-	-	711	682	-	554	549	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	923	-	-	1138	-	-	150	181	643	160	185	477
Stage 1	-	-	-	-	-	-	529	523	-	456	464	-
Stage 2	-	-	-	-	-	-	424	450	-	517	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	923	-	-	1138	-	-	115	167	643	144	171	477
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	167	-	144	171	-
Stage 1	-	-	-	-	-	-	492	487	-	425	461	-
Stage 2	-	-	-	-	-	-	346	447	-	464	480	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.1	54.7	19.3
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	146	923	-	-	1138	-	-	146	477
HCM Lane V/C Ratio	0.532	0.069	-	-	0.007	-	-	0.186	0.174
HCM Control Delay (s)	54.7	9.2	-	-	8.2	-	-	35.2	14.1
HCM Lane LOS	F	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	2.6	0.2	-	-	0	-	-	0.7	0.6

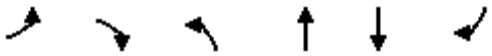
Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	258	171	375	103	77	231
Future Vol, veh/h	258	171	375	103	77	231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	230	-	-	300	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	90	90	80	80
Heavy Vehicles, %	20	5	5	20	20	20
Mvmt Flow	266	176	417	114	96	289

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	417	0	-	0	1125	417
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	708	-
Critical Hdwy	4.3	-	-	-	6.6	6.4
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.38	-	-	-	3.68	3.48
Pot Cap-1 Maneuver	1052	-	-	0	209	599
Stage 1	-	-	-	0	628	-
Stage 2	-	-	-	0	457	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1052	-	-	-	156	599
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	457	-

Approach	EB	WB	SB
HCM Control Delay, s	5.8	0	27.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1052	-	-	156	599
HCM Lane V/C Ratio	0.253	-	-	0.617	0.482
HCM Control Delay (s)	9.6	-	-	59.5	16.5
HCM Lane LOS	A	-	-	F	C
HCM 95th %tile Q(veh)	1	-	-	3.3	2.6



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	90	127	338	417	88
Future Volume (veh/h)	14	90	127	338	417	88
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	19	123	144	384	463	98
Peak Hour Factor	0.73	0.73	0.88	0.88	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4
Cap, veh/h	215	191	555	1013	811	172
Arrive On Green	0.12	0.12	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1781	1585	849	1841	1473	312
Grp Volume(v), veh/h	19	123	144	384	0	561
Grp Sat Flow(s),veh/h/ln	1781	1585	849	1841	0	1785
Q Serve(g_s), s	0.3	2.0	3.7	3.2	0.0	5.6
Cycle Q Clear(g_c), s	0.3	2.0	9.3	3.2	0.0	5.6
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	215	191	555	1013	0	982
V/C Ratio(X)	0.09	0.64	0.26	0.38	0.00	0.57
Avail Cap(c_a), veh/h	1661	1478	2276	4744	0	4599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	11.5	7.1	3.5	0.0	4.0
Incr Delay (d2), s/veh	0.2	3.6	0.2	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.4	0.3	0.0	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.9	15.1	7.3	3.7	0.0	4.6
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	142			528	561	
Approach Delay, s/veh	14.5			4.7	4.6	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		19.6		7.8		19.6
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		70.5		25.5		70.5
Max Q Clear Time (g_c+I1), s		11.3		4.0		7.6
Green Ext Time (p_c), s		3.7		0.4		4.5

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	338	44	48	355	722	78	355	109	498	260	253
Future Volume (veh/h)	415	338	44	48	355	722	78	355	109	498	260	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	472	384	50	49	366	744	92	418	128	530	277	269
Peak Hour Factor	0.88	0.88	0.88	0.97	0.97	0.97	0.85	0.85	0.85	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	539	519	67	487	410	961	394	545	462	629	686	572
Arrive On Green	0.16	0.17	0.17	0.21	0.22	0.22	0.05	0.29	0.29	0.13	0.37	0.37
Sat Flow, veh/h	3401	3114	403	1781	1841	2745	1781	1870	1585	4944	1870	1560
Grp Volume(v), veh/h	472	214	220	49	366	744	92	418	128	530	277	269
Grp Sat Flow(s),veh/h/ln	1700	1749	1768	1781	1841	1373	1781	1870	1585	1648	1870	1560
Q Serve(g_s), s	12.2	10.5	10.6	0.0	17.4	11.4	3.2	18.4	3.1	9.4	9.9	7.0
Cycle Q Clear(g_c), s	12.2	10.5	10.6	0.0	17.4	11.4	3.2	18.4	3.1	9.4	9.9	7.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	539	292	295	487	410	961	394	545	462	629	686	572
V/C Ratio(X)	0.88	0.74	0.74	0.10	0.89	0.77	0.23	0.77	0.28	0.84	0.40	0.47
Avail Cap(c_a), veh/h	548	581	587	487	419	975	412	545	462	632	686	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	35.6	35.7	27.2	33.9	9.9	20.5	29.1	7.6	38.4	21.2	7.6
Incr Delay (d2), s/veh	14.6	3.6	3.7	0.1	20.6	3.9	0.3	9.9	1.5	10.0	1.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	4.7	4.8	0.8	9.9	3.4	1.3	9.5	2.2	4.3	4.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	39.2	39.4	27.2	54.5	13.8	20.8	39.0	9.1	48.4	23.0	10.4
LnGrp LOS	D	D	D	C	D	B	C	D	A	D	C	B
Approach Vol, veh/h		906			1159			638			1076	
Approach Delay, s/veh		45.7			27.2			30.4			32.4	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	30.7	23.8	19.5	9.2	37.5	18.8	24.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.5	25.5	5.1	29.9	5.6	31.4	14.5	20.5
Max Q Clear Time (g_c+I1), s	11.4	20.4	2.0	12.6	5.2	11.9	14.2	19.4
Green Ext Time (p_c), s	0.0	1.4	0.0	2.4	0.0	2.5	0.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

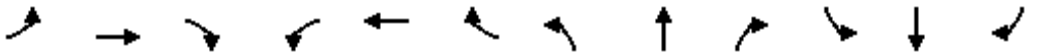
Notes

User approved changes to right turn type.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	543	15	18	969	43	28
Future Volume (veh/h)	543	15	18	969	43	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870
Adj Flow Rate, veh/h	662	18	19	1031	48	31
Peak Hour Factor	0.82	0.82	0.94	0.94	0.90	0.90
Percent Heavy Veh, %	5	2	2	5	2	2
Cap, veh/h	1119	971	367	1119	537	478
Arrive On Green	0.61	0.61	0.61	0.61	0.30	0.30
Sat Flow, veh/h	1826	1585	760	1826	1781	1585
Grp Volume(v), veh/h	662	18	19	1031	48	31
Grp Sat Flow(s),veh/h/ln	1826	1585	760	1826	1781	1585
Q Serve(g_s), s	23.1	0.5	1.6	52.7	2.0	1.5
Cycle Q Clear(g_c), s	23.1	0.5	24.8	52.7	2.0	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1119	971	367	1119	537	478
V/C Ratio(X)	0.59	0.02	0.05	0.92	0.09	0.06
Avail Cap(c_a), veh/h	1348	1170	462	1348	537	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	8.0	19.9	18.1	26.3	26.1
Incr Delay (d2), s/veh	0.5	0.0	0.1	9.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.2	0.3	22.8	0.9	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	8.0	19.9	27.5	26.7	26.4
LnGrp LOS	B	A	B	C	C	C
Approach Vol, veh/h	680			1050	79	
Approach Delay, s/veh	12.7			27.4	26.5	
Approach LOS	B			C	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	36.2	68.8	68.8
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	77.5	77.5
Max Q Clear Time (g_c+I1), s	4.0	25.1	54.7
Green Ext Time (p_c), s	0.1	5.6	9.6

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	474	48	132	405	610	29	240	185	1085	558	428
Future Volume (veh/h)	379	474	48	132	405	610	29	240	185	1085	558	428
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	416	521	53	138	422	635	31	255	197	1179	607	465
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.94	0.94	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	443	617	63	381	438	1632	173	283	240	1212	903	753
Arrive On Green	0.13	0.19	0.19	0.18	0.24	0.24	0.02	0.15	0.15	0.36	0.48	0.48
Sat Flow, veh/h	3401	3206	325	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	416	284	290	138	422	635	31	255	197	1179	607	465
Grp Sat Flow(s),veh/h/ln	1700	1749	1782	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	17.6	22.7	22.8	4.1	32.9	7.9	2.1	19.4	12.6	49.5	36.0	20.0
Cycle Q Clear(g_c), s	17.6	22.7	22.8	4.1	32.9	7.9	2.1	19.4	12.6	49.5	36.0	20.0
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	443	337	343	381	438	1632	173	283	240	1212	903	753
V/C Ratio(X)	0.94	0.84	0.85	0.36	0.96	0.39	0.18	0.90	0.82	0.97	0.67	0.62
Avail Cap(c_a), veh/h	443	482	492	381	438	1632	192	283	240	1215	903	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	56.4	56.5	49.7	54.6	5.6	50.1	60.5	30.9	46.0	28.7	10.9
Incr Delay (d2), s/veh	27.9	9.0	9.2	0.6	33.6	0.2	0.5	33.4	26.2	19.5	4.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	10.9	11.2	4.4	19.3	2.7	1.0	11.9	6.6	24.1	17.1	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.3	65.4	65.7	50.3	88.2	5.7	50.6	93.9	57.1	65.4	32.7	14.7
LnGrp LOS	F	E	E	D	F	A	D	F	E	E	C	B
Approach Vol, veh/h		990			1195			483			2251	
Approach Delay, s/veh		76.0			40.0			76.1			46.1	
Approach LOS		E			D			E			D	

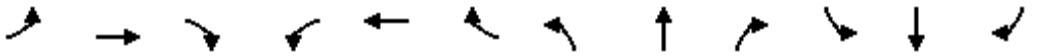
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	56.2	26.4	30.0	32.4	8.1	74.5	23.4	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	51.8	21.8	13.4	40.0	5.1	68.5	18.9	34.5
Max Q Clear Time (g_c+I1), s	51.5	21.4	6.1	24.8	4.1	38.0	19.6	34.9
Green Ext Time (p_c), s	0.2	0.1	0.2	3.1	0.0	6.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.6
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1065	162	101	1004	187	96
Future Volume (veh/h)	1065	162	101	1004	187	96
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1826	1870	1870
Adj Flow Rate, veh/h	1121	171	112	1116	199	102
Peak Hour Factor	0.95	0.95	0.90	0.90	0.94	0.94
Percent Heavy Veh, %	5	5	2	5	2	2
Cap, veh/h	1874	285	256	2154	482	429
Arrive On Green	0.62	0.62	0.62	0.62	0.27	0.27
Sat Flow, veh/h	3110	459	427	3561	1781	1585
Grp Volume(v), veh/h	643	649	112	1116	199	102
Grp Sat Flow(s),veh/h/ln	1735	1743	427	1735	1781	1585
Q Serve(g_s), s	18.5	18.7	17.8	14.9	7.6	4.2
Cycle Q Clear(g_c), s	18.5	18.7	36.5	14.9	7.6	4.2
Prop In Lane		0.26	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1077	1082	256	2154	482	429
V/C Ratio(X)	0.60	0.60	0.44	0.52	0.41	0.24
Avail Cap(c_a), veh/h	1534	1542	368	3069	482	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.5	9.5	20.5	8.8	24.9	23.6
Incr Delay (d2), s/veh	0.5	0.5	1.2	0.2	2.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.2	1.8	4.9	3.5	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	10.1	21.7	9.0	27.5	24.9
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	1292			1228	301	
Approach Delay, s/veh	10.0			10.2	26.6	
Approach LOS	B			B	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	27.0	56.1	56.1
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	22.5	73.5	73.5
Max Q Clear Time (g_c+I1), s	9.6	20.7	38.5
Green Ext Time (p_c), s	0.7	13.0	13.1

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	1094	241	71	721	15	118	10	71	45	12	60
Future Volume (veh/h)	47	1094	241	71	721	15	118	10	71	45	12	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	1164	256	78	792	16	144	12	87	52	14	70
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.82	0.82	0.82	0.86	0.86	0.86
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	404	1193	1036	163	1205	1046	238	324	275	287	47	235
Arrive On Green	0.04	0.65	0.65	0.04	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	1826	1585	1781	1826	1585	1314	1870	1585	1296	271	1355
Grp Volume(v), veh/h	50	1164	256	78	792	16	144	12	87	52	0	84
Grp Sat Flow(s),veh/h/ln	1781	1826	1585	1781	1826	1585	1314	1870	1585	1296	0	1626
Q Serve(g_s), s	0.9	63.3	6.9	1.4	27.1	0.4	11.1	0.6	5.0	3.6	0.0	4.7
Cycle Q Clear(g_c), s	0.9	63.3	6.9	1.4	27.1	0.4	15.8	0.6	5.0	4.2	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	404	1193	1036	163	1205	1046	238	324	275	287	0	282
V/C Ratio(X)	0.12	0.98	0.25	0.48	0.66	0.02	0.61	0.04	0.32	0.18	0.00	0.30
Avail Cap(c_a), veh/h	426	1205	1046	172	1205	1046	238	324	275	287	0	282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	17.2	7.4	26.7	10.6	6.1	44.3	35.7	37.5	37.4	0.0	37.4
Incr Delay (d2), s/veh	0.1	20.1	0.1	2.2	1.3	0.0	10.9	0.2	3.0	1.4	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	29.5	2.2	1.3	10.1	0.1	4.3	0.3	2.2	1.3	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	37.3	7.6	28.9	11.9	6.1	55.2	35.9	40.5	38.8	0.0	40.1
LnGrp LOS	A	D	A	C	B	A	E	D	D	D	A	D
Approach Vol, veh/h		1470			886			243			136	
Approach Delay, s/veh		31.2			13.3			49.0			39.6	
Approach LOS		C			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	9.0	72.3		22.5	8.3	73.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	5.0	68.5		18.0	5.1	68.4				
Max Q Clear Time (g_c+I1), s		17.8	3.4	65.3		6.7	2.9	29.1				
Green Ext Time (p_c), s		0.0	0.0	2.6		0.4	0.0	7.2				

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1223	58	26	788	18	27
Future Vol, veh/h	1223	58	26	788	18	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	92	92	67	67
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	1315	62	28	857	27	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1377	0	2228	1315
Stage 1	-	-	-	-	1315	-
Stage 2	-	-	-	-	913	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	498	-	47	193
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	498	-	42	193
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	91.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	42	193	-	-	498	-
HCM Lane V/C Ratio	0.64	0.209	-	-	0.057	-
HCM Control Delay (s)	186.4	28.5	-	-	12.7	0
HCM Lane LOS	F	D	-	-	B	A
HCM 95th %tile Q(veh)	2.4	0.8	-	-	0.2	-

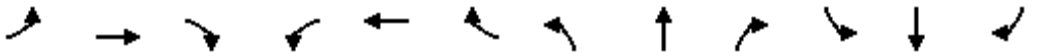
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	964	55	3	451	21	15
Future Vol, veh/h	964	55	3	451	21	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	96	96	69	69
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	1121	64	3	470	30	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1185	0	1629	1153
Stage 1	-	-	-	-	1153	-
Stage 2	-	-	-	-	476	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	589	-	112	240
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	589	-	111	240
Mov Cap-2 Maneuver	-	-	-	-	111	-
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	625	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	44
HCM LOS			E

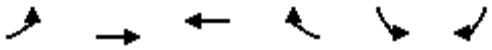
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	143	-	-	589	-
HCM Lane V/C Ratio	0.365	-	-	0.005	-
HCM Control Delay (s)	44	-	-	11.1	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	1.5	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	421	793	84	26	404	78	66	141	34	213	246	308
Future Volume (veh/h)	421	793	84	26	404	78	66	141	34	213	246	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1870	1870	1826	1856	1870	1870	1870	1870	1870	1841
Adj Flow Rate, veh/h	430	809	86	28	439	85	76	162	39	234	270	338
Peak Hour Factor	0.98	0.98	0.98	0.92	0.92	0.92	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	4	5	2	2	5	3	2	2	2	2	2	4
Cap, veh/h	470	958	832	169	500	431	293	306	74	422	529	441
Arrive On Green	0.20	0.52	0.52	0.27	0.27	0.27	0.05	0.21	0.21	0.12	0.28	0.28
Sat Flow, veh/h	1753	1826	1585	622	1826	1572	1781	1457	351	1781	1870	1560
Grp Volume(v), veh/h	430	809	86	28	439	85	76	0	201	234	270	338
Grp Sat Flow(s),veh/h/ln	1753	1826	1585	622	1826	1572	1781	0	1807	1781	1870	1560
Q Serve(g_s), s	15.9	35.1	2.5	3.7	21.3	3.8	3.1	0.0	9.2	9.1	11.2	18.4
Cycle Q Clear(g_c), s	15.9	35.1	2.5	15.6	21.3	3.8	3.1	0.0	9.2	9.1	11.2	18.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	470	958	832	169	500	431	293	0	380	422	529	441
V/C Ratio(X)	0.91	0.84	0.10	0.17	0.88	0.20	0.26	0.00	0.53	0.55	0.51	0.77
Avail Cap(c_a), veh/h	579	1191	1034	209	620	534	307	0	380	430	529	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	18.8	11.1	35.4	32.2	25.9	26.9	0.0	32.6	23.3	27.9	30.5
Incr Delay (d2), s/veh	17.0	4.8	0.1	0.5	11.6	0.2	0.5	0.0	5.2	1.5	3.5	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	14.9	0.9	0.6	10.8	1.4	1.3	0.0	4.5	3.9	5.4	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	23.6	11.1	35.8	43.8	26.1	27.3	0.0	37.8	24.8	31.4	42.4
LnGrp LOS	D	C	B	D	D	C	C	A	D	C	C	D
Approach Vol, veh/h		1325			552			277			842	
Approach Delay, s/veh		27.4			40.6			34.9			34.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	24.0		53.2	8.9	30.7	23.3	29.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	19.5		60.5	5.1	25.9	24.5	31.5				
Max Q Clear Time (g_c+I1), s	11.1	11.2		37.1	5.1	20.4	17.9	23.3				
Green Ext Time (p_c), s	0.0	0.6		6.8	0.0	1.4	0.8	2.1				

Intersection Summary												
HCM 6th Ctrl Delay			32.4									
HCM 6th LOS			C									



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	72	741	412	42	134	186
Future Volume (veh/h)	72	741	412	42	134	186
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1604	1826	1826	1604	1604	1604
Adj Flow Rate, veh/h	77	788	458	0	319	443
Peak Hour Factor	0.94	0.94	0.90	0.90	0.42	0.42
Percent Heavy Veh, %	20	5	5	20	20	20
Cap, veh/h	302	888	704		626	557
Arrive On Green	0.05	0.49	0.39	0.00	0.41	0.41
Sat Flow, veh/h	1527	1826	1826	1359	1527	1359
Grp Volume(v), veh/h	77	788	458	0	319	443
Grp Sat Flow(s),veh/h/ln	1527	1826	1826	1359	1527	1359
Q Serve(g_s), s	2.5	33.8	17.8	0.0	13.5	24.7
Cycle Q Clear(g_c), s	2.5	33.8	17.8	0.0	13.5	24.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	302	888	704		626	557
V/C Ratio(X)	0.26	0.89	0.65		0.51	0.80
Avail Cap(c_a), veh/h	338	1275	1047		626	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	20.1	21.8	0.0	19.1	22.4
Incr Delay (d2), s/veh	0.4	5.8	1.0	0.0	3.0	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.5	7.5	0.0	5.1	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.4	25.9	22.8	0.0	22.0	33.6
LnGrp LOS	B	C	C		C	C
Approach Vol, veh/h		865	458	A	762	
Approach Delay, s/veh		25.0	22.8		28.8	
Approach LOS		C	C		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			46.6		40.0	8.7	37.9
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			60.5		35.5	6.3	49.7
Max Q Clear Time (g_c+I1), s			35.8		26.7	4.5	19.8
Green Ext Time (p_c), s			6.4		2.0	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1622	-	1021	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	799	581	0	0	39
Future Vol, veh/h	0	799	581	0	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	97	71	71	92	32
Heavy Vehicles, %	2	5	5	2	2	20
Mvmt Flow	0	824	818	0	0	122

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	818
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.48
Pot Cap-1 Maneuver	0	-	-	0	0	350
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	350
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	350
HCM Lane V/C Ratio	-	-	0.348
HCM Control Delay (s)	-	-	20.7
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.5

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	809	57	15	416	8	24	3	17	6	2	14
Future Vol, veh/h	9	809	57	15	416	8	24	3	17	6	2	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	120	150	-	300	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	90	90	90	80	80	80	60	60	60
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	10	861	61	17	462	9	30	4	21	10	3	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	471	0	0	922	0	0	1395	1386	861	1420	1438	462
Stage 1	-	-	-	-	-	-	881	881	-	496	496	-
Stage 2	-	-	-	-	-	-	514	505	-	924	942	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1091	-	-	741	-	-	119	143	355	114	133	600
Stage 1	-	-	-	-	-	-	341	365	-	556	545	-
Stage 2	-	-	-	-	-	-	543	540	-	323	342	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1091	-	-	741	-	-	109	138	355	102	129	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	138	-	102	129	-
Stage 1	-	-	-	-	-	-	338	362	-	551	532	-
Stage 2	-	-	-	-	-	-	507	528	-	298	339	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	41.5	22.8
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	152	1091	-	-	741	-	-	108	600
HCM Lane V/C Ratio	0.362	0.009	-	-	0.022	-	-	0.123	0.039
HCM Control Delay (s)	41.5	8.3	-	-	10	-	-	43	11.2
HCM Lane LOS	E	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	1.5	0	-	-	0.1	-	-	0.4	0.1

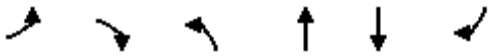
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	815	384	30	33	55
Future Vol, veh/h	17	815	384	30	33	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	230	-	-	300	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	90	90	70	70
Heavy Vehicles, %	20	5	5	20	20	20
Mvmt Flow	18	867	427	33	47	79

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	427	0	-	0	1330	427
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	903	-
Critical Hdwy	4.3	-	-	-	6.6	6.4
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.38	-	-	-	3.68	3.48
Pot Cap-1 Maneuver	1043	-	-	0	156	591
Stage 1	-	-	-	0	621	-
Stage 2	-	-	-	0	368	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1043	-	-	-	153	591
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	368	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	22
HCM LOS			C

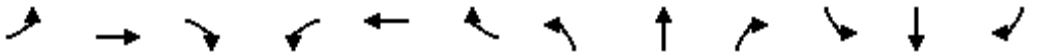
Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1043	-	-	153	591
HCM Lane V/C Ratio	0.017	-	-	0.308	0.133
HCM Control Delay (s)	8.5	-	-	38.7	12
HCM Lane LOS	A	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	1.2	0.5



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	266	108	500	450	88
Future Volume (veh/h)	80	266	108	500	450	88
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	98	324	123	568	484	95
Peak Hour Factor	0.82	0.82	0.88	0.88	0.93	0.93
Percent Heavy Veh, %	2	2	2	4	4	4
Cap, veh/h	474	422	415	963	782	154
Arrive On Green	0.27	0.27	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1781	1585	835	1841	1495	293
Grp Volume(v), veh/h	98	324	123	568	0	579
Grp Sat Flow(s),veh/h/ln	1781	1585	835	1841	0	1788
Q Serve(g_s), s	1.8	8.1	5.2	9.1	0.0	9.8
Cycle Q Clear(g_c), s	1.8	8.1	15.0	9.1	0.0	9.8
Prop In Lane	1.00	1.00	1.00			0.16
Lane Grp Cap(c), veh/h	474	422	415	963	0	936
V/C Ratio(X)	0.21	0.77	0.30	0.59	0.00	0.62
Avail Cap(c_a), veh/h	1313	1168	1238	2778	0	2698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	14.5	12.5	7.0	0.0	7.2
Incr Delay (d2), s/veh	0.2	3.0	0.4	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.7	0.8	2.4	0.0	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	17.4	12.8	7.6	0.0	7.9
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	422			691	579	
Approach Delay, s/veh	16.3			8.5	7.9	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		26.9		15.9		26.9
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		64.5		31.5		64.5
Max Q Clear Time (g_c+I1), s		17.0		10.1		11.8
Green Ext Time (p_c), s		5.4		1.4		4.6

Intersection Summary		
HCM 6th Ctrl Delay		10.2
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	474	48	132	405	610	29	240	185	1085	558	428
Future Volume (veh/h)	379	474	48	132	405	610	29	240	185	1085	558	428
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	416	521	53	138	422	635	31	255	197	1179	607	465
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.94	0.94	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	442	643	65	400	423	1287	200	376	319	1181	767	842
Arrive On Green	0.13	0.20	0.20	0.16	0.23	0.23	0.03	0.20	0.20	0.24	0.41	0.41
Sat Flow, veh/h	3401	3206	325	1781	1841	2745	1781	1870	1585	4944	1870	1560
Grp Volume(v), veh/h	416	284	290	138	422	635	31	255	197	1179	607	465
Grp Sat Flow(s),veh/h/ln	1700	1749	1782	1781	1841	1373	1781	1870	1585	1648	1870	1560
Q Serve(g_s), s	10.9	13.9	14.0	0.0	20.6	6.8	1.2	11.4	6.9	21.5	25.5	3.1
Cycle Q Clear(g_c), s	10.9	13.9	14.0	0.0	20.6	6.8	1.2	11.4	6.9	21.5	25.5	3.1
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	351	357	400	423	1287	200	376	319	1181	767	842
V/C Ratio(X)	0.94	0.81	0.81	0.34	1.00	0.49	0.16	0.68	0.62	1.00	0.79	0.55
Avail Cap(c_a), veh/h	442	451	459	400	423	1287	246	376	319	1181	767	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	34.3	34.4	31.3	34.6	5.6	27.3	33.3	14.9	34.2	23.2	5.4
Incr Delay (d2), s/veh	28.4	8.3	8.4	0.5	42.8	0.3	0.4	9.5	8.7	25.8	8.2	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	6.6	6.8	2.6	14.0	2.2	0.5	6.0	3.2	11.1	12.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.2	42.6	42.8	31.8	77.5	5.9	27.7	42.7	23.6	60.0	31.4	8.0
LnGrp LOS	E	D	D	C	E	A	C	D	C	E	C	A
Approach Vol, veh/h		990			1195			483			2251	
Approach Delay, s/veh		53.0			34.1			34.0			41.5	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	22.6	18.9	22.5	7.2	41.4	16.2	25.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	21.5	18.1	9.2	23.2	5.0	34.6	11.7	20.7
Max Q Clear Time (g_c+I1), s	23.5	13.4	2.0	16.0	3.2	27.5	12.9	22.6
Green Ext Time (p_c), s	0.0	1.0	0.2	2.0	0.0	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

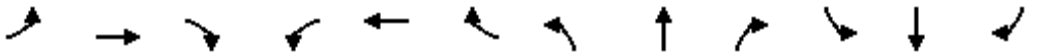
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1223	58	26	788	18	27
Future Volume (veh/h)	1223	58	26	788	18	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870
Adj Flow Rate, veh/h	1315	62	28	857	27	40
Peak Hour Factor	0.93	0.93	0.92	0.92	0.67	0.67
Percent Heavy Veh, %	5	2	2	5	2	2
Cap, veh/h	1348	1170	94	1348	314	279
Arrive On Green	0.74	0.74	0.74	0.74	0.18	0.18
Sat Flow, veh/h	1826	1585	394	1826	1781	1585
Grp Volume(v), veh/h	1315	62	28	857	27	40
Grp Sat Flow(s),veh/h/ln	1826	1585	394	1826	1781	1585
Q Serve(g_s), s	70.8	1.1	6.7	24.3	1.3	2.2
Cycle Q Clear(g_c), s	70.8	1.1	77.5	24.3	1.3	2.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1348	1170	94	1348	314	279
V/C Ratio(X)	0.98	0.05	0.30	0.64	0.09	0.14
Avail Cap(c_a), veh/h	1348	1170	94	1348	314	279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	3.7	49.5	6.8	36.2	36.6
Incr Delay (d2), s/veh	18.9	0.0	1.8	1.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.4	0.3	0.8	8.0	0.6	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.8	3.8	51.2	7.8	36.7	37.6
LnGrp LOS	C	A	D	A	D	D
Approach Vol, veh/h	1377			885	67	
Approach Delay, s/veh	30.5			9.2	37.3	
Approach LOS	C			A	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	23.0	82.0	82.0
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	77.5	77.5
Max Q Clear Time (g_c+I1), s	4.2	72.8	79.5
Green Ext Time (p_c), s	0.1	3.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Appendix D

No-Build Intersection Operational Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	369	49	52	394	814	86	397	116	555	287	280
Future Volume (veh/h)	464	369	49	52	394	814	86	397	116	555	287	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	516	410	54	53	402	831	100	462	135	578	299	292
Peak Hour Factor	0.90	0.90	0.90	0.98	0.98	0.98	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	560	506	66	490	431	1142	370	552	468	618	812	677
Arrive On Green	0.16	0.16	0.16	0.24	0.23	0.23	0.04	0.30	0.30	0.18	0.43	0.43
Sat Flow, veh/h	3401	3109	407	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	516	229	235	53	402	831	100	462	135	578	299	292
Grp Sat Flow(s),veh/h/ln	1700	1749	1767	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	21.7	18.3	18.6	0.0	31.0	20.5	5.7	33.5	5.5	24.3	15.6	11.3
Cycle Q Clear(g_c), s	21.7	18.3	18.6	0.0	31.0	20.5	5.7	33.5	5.5	24.3	15.6	11.3
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	560	284	288	490	431	1142	370	552	468	618	812	677
V/C Ratio(X)	0.92	0.81	0.82	0.11	0.93	0.73	0.27	0.84	0.29	0.94	0.37	0.43
Avail Cap(c_a), veh/h	575	643	650	490	438	1152	370	552	468	622	812	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	58.5	58.6	41.7	54.4	15.0	33.7	47.8	13.1	58.5	27.6	10.3
Incr Delay (d2), s/veh	20.2	5.4	5.6	0.1	26.7	2.3	0.4	14.0	1.6	21.5	1.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	8.6	8.8	1.5	17.6	6.5	2.6	17.8	3.8	12.3	7.4	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	63.9	64.2	41.8	81.1	17.4	34.0	61.8	14.6	80.0	28.9	12.3
LnGrp LOS	E	E	E	D	F	B	C	E	B	E	C	B
Approach Vol, veh/h		980			1286			697			1169	
Approach Delay, s/veh		72.4			38.3			48.7			50.0	
Approach LOS		E			D			D			D	

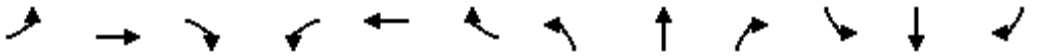
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.9	47.3	38.7	28.1	10.7	67.5	28.4	38.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	26.5	41.5	5.7	53.3	6.2	61.8	24.5	34.5
Max Q Clear Time (g_c+I1), s	26.3	35.5	2.0	20.6	7.7	17.6	23.7	33.0
Green Ext Time (p_c), s	0.1	1.7	0.0	3.0	0.0	3.1	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	699	81	54	1139	119	86
Future Volume (veh/h)	699	81	54	1139	119	86
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1826	1870	1870
Adj Flow Rate, veh/h	803	93	59	1238	153	110
Peak Hour Factor	0.87	0.87	0.92	0.92	0.78	0.78
Percent Heavy Veh, %	5	5	2	5	2	2
Cap, veh/h	1573	182	306	1742	662	589
Arrive On Green	0.50	0.50	0.50	0.50	0.37	0.37
Sat Flow, veh/h	3224	363	621	3561	1781	1585
Grp Volume(v), veh/h	445	451	59	1238	153	110
Grp Sat Flow(s),veh/h/ln	1735	1761	621	1735	1781	1585
Q Serve(g_s), s	12.2	12.2	5.0	19.7	4.2	3.3
Cycle Q Clear(g_c), s	12.2	12.2	17.2	19.7	4.2	3.3
Prop In Lane		0.21	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	871	884	306	1742	662	589
V/C Ratio(X)	0.51	0.51	0.19	0.71	0.23	0.19
Avail Cap(c_a), veh/h	1690	1716	600	3381	662	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	11.9	17.7	13.7	15.4	15.1
Incr Delay (d2), s/veh	0.5	0.5	0.3	0.5	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	4.3	0.7	6.8	1.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.3	12.3	18.0	14.3	16.2	15.8
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	896			1297	263	
Approach Delay, s/veh	12.3			14.5	16.1	
Approach LOS	B			B	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	31.0	40.3	40.3
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	26.5	69.5	69.5
Max Q Clear Time (g_c+I1), s	6.2	14.2	21.7
Green Ext Time (p_c), s	0.7	7.2	14.1

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	558	81	81	1040	11	181	16	89	8	0	19
Future Volume (veh/h)	28	558	81	81	1040	11	181	16	89	8	0	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	634	92	87	1118	12	266	24	131	14	0	33
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.68	0.68	0.68	0.58	0.58	0.58
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	193	1330	608	347	1395	637	637	780	661	585	0	661
Arrive On Green	0.03	0.38	0.38	0.05	0.40	0.40	0.42	0.42	0.42	0.42	0.00	0.42
Sat Flow, veh/h	1781	3469	1585	1781	3469	1585	1376	1870	1585	1232	0	1585
Grp Volume(v), veh/h	32	634	92	87	1118	12	266	24	131	14	0	33
Grp Sat Flow(s),veh/h/ln	1781	1735	1585	1781	1735	1585	1376	1870	1585	1232	0	1585
Q Serve(g_s), s	1.0	12.4	3.4	2.6	25.6	0.4	12.8	0.7	4.7	0.6	0.0	1.1
Cycle Q Clear(g_c), s	1.0	12.4	3.4	2.6	25.6	0.4	13.9	0.7	4.7	1.3	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1330	608	347	1395	637	637	780	661	585	0	661
V/C Ratio(X)	0.17	0.48	0.15	0.25	0.80	0.02	0.42	0.03	0.20	0.02	0.00	0.05
Avail Cap(c_a), veh/h	248	1833	837	388	1871	855	637	780	661	585	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	20.9	18.1	16.2	23.7	16.2	19.8	15.5	16.7	15.9	0.0	15.6
Incr Delay (d2), s/veh	0.4	0.3	0.1	0.4	1.9	0.0	2.0	0.1	0.7	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.9	1.2	1.1	10.3	0.1	4.3	0.3	1.8	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	21.2	18.3	16.6	25.6	16.2	21.8	15.5	17.3	15.9	0.0	15.7
LnGrp LOS	B	C	B	B	C	B	C	B	B	B	A	B
Approach Vol, veh/h		758			1217			421			47	
Approach Delay, s/veh		20.7			24.8			20.0			15.8	
Approach LOS		C			C			C			B	

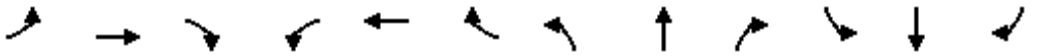
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		42.0	8.9	39.0		42.0	7.3	40.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		37.5	6.5	47.5		37.5	5.5	48.5				
Max Q Clear Time (g_c+I1), s		15.9	4.6	14.4		3.3	3.0	27.6				
Green Ext Time (p_c), s		1.3	0.0	5.3		0.2	0.0	8.6				

Intersection Summary												
HCM 6th Ctrl Delay			22.6									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C

Approach	EB	WB	NB
Entry Lanes	2	2	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	720	1166	86
Demand Flow Rate, veh/h	755	1223	88
Vehicles Circulating, veh/h	21	53	736
Vehicles Exiting, veh/h	1255	771	40
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.2	25.7	7.2
Approach LOS	A	D	A

Lane	Left	Right	Left	Left
Designated Moves	LT	R	LT	LR
Assumed Moves	LT	R	LT	LR
RT Channelized				
Lane Util	0.975	0.025	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.609
Critical Headway, s	4.544	4.544	4.544	4.976
Entry Flow, veh/h	736	19	1223	88
Cap Entry Lane, veh/h	1393	1393	1353	651
Entry HV Adj Factor	0.952	1.000	0.953	0.977
Flow Entry, veh/h	701	19	1166	86
Cap Entry, veh/h	1327	1393	1290	637
V/C Ratio	0.528	0.014	0.904	0.135
Control Delay, s/veh	8.4	2.7	25.7	7.2
LOS	A	A	D	A
95th %tile Queue, veh	3	0	15	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	470	25	61	672	178	90	117	80	188	116	389
Future Volume (veh/h)	228	470	25	61	672	178	90	117	80	188	116	389
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1870	1870	1826	1856	1870	1870	1870	1870	1870	1841
Adj Flow Rate, veh/h	238	490	26	64	707	187	97	126	86	194	120	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.93	0.93	0.93	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	2	2	5	3	2	2	2	2	2	4
Cap, veh/h	277	1024	889	436	753	649	407	230	157	328	427	
Arrive On Green	0.10	0.56	0.56	0.41	0.41	0.41	0.06	0.22	0.22	0.06	0.23	0.00
Sat Flow, veh/h	1753	1826	1585	885	1826	1572	1781	1036	707	1781	1870	1560
Grp Volume(v), veh/h	238	490	26	64	707	187	97	0	212	194	120	0
Grp Sat Flow(s),veh/h/ln	1753	1826	1585	885	1826	1572	1781	0	1743	1781	1870	1560
Q Serve(g_s), s	6.4	14.1	0.6	4.1	32.5	7.0	3.6	0.0	9.4	5.5	4.6	0.0
Cycle Q Clear(g_c), s	6.4	14.1	0.6	5.2	32.5	7.0	3.6	0.0	9.4	5.5	4.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	277	1024	889	436	753	649	407	0	388	328	427	
V/C Ratio(X)	0.86	0.48	0.03	0.15	0.94	0.29	0.24	0.00	0.55	0.59	0.28	
Avail Cap(c_a), veh/h	298	1073	931	449	781	673	407	0	388	328	427	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.2	11.6	8.6	17.0	24.7	17.2	24.2	0.0	30.2	28.2	27.9	0.0
Incr Delay (d2), s/veh	20.4	0.3	0.0	0.2	18.5	0.2	0.3	0.0	5.5	2.8	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	5.3	0.2	0.8	17.0	2.5	1.5	0.0	4.5	1.3	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	11.9	8.6	17.2	43.2	17.4	24.5	0.0	35.6	31.0	29.6	0.0
LnGrp LOS	D	B	A	B	D	B	C	A	D	C	C	
Approach Vol, veh/h		754			958			309			314	A
Approach Delay, s/veh		20.5			36.4			32.1			30.4	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	24.0		53.7	9.5	24.5	13.0	40.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	19.5		51.5	5.0	20.0	9.5	37.5				
Max Q Clear Time (g_c+I1), s	7.5	11.4		16.1	5.6	6.6	8.4	34.5				
Green Ext Time (p_c), s	0.0	0.7		3.6	0.0	0.4	0.1	1.6				

Intersection Summary												
HCM 6th Ctrl Delay			29.9									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

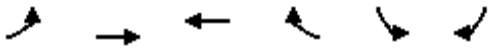
Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	695	10	21	869	18	53
Future Vol, veh/h	695	10	21	869	18	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	87	87	55	55
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	781	11	24	999	33	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	792	0	1834	787
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	1047	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	829	-	84	392
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	338	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	829	-	82	392
Mov Cap-2 Maneuver	-	-	-	-	82	-
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	338	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	50.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	200	-	-	829	-
HCM Lane V/C Ratio	0.645	-	-	0.029	-
HCM Control Delay (s)	50.9	-	-	9.5	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	3.8	-	-	0.1	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	74	826	468	42	135	188
Future Volume (veh/h)	74	826	468	42	135	188
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1604	1826	1826	1604	1604	1604
Adj Flow Rate, veh/h	77	860	514	0	321	448
Peak Hour Factor	0.96	0.96	0.91	0.91	0.42	0.42
Percent Heavy Veh, %	20	5	5	20	20	20
Cap, veh/h	307	958	779		572	509
Arrive On Green	0.05	0.52	0.43	0.00	0.37	0.37
Sat Flow, veh/h	1527	1826	1826	1359	1527	1359
Grp Volume(v), veh/h	77	860	514	0	321	448
Grp Sat Flow(s),veh/h/ln	1527	1826	1826	1359	1527	1359
Q Serve(g_s), s	2.4	37.8	20.1	0.0	14.9	27.5
Cycle Q Clear(g_c), s	2.4	37.8	20.1	0.0	14.9	27.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	307	958	779		572	509
V/C Ratio(X)	0.25	0.90	0.66		0.56	0.88
Avail Cap(c_a), veh/h	343	1277	1054		572	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	19.1	20.5	0.0	22.1	26.1
Incr Delay (d2), s/veh	0.4	7.0	1.0	0.0	3.9	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	16.3	8.3	0.0	5.8	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.4	26.1	21.4	0.0	26.1	45.1
LnGrp LOS	B	C	C		C	D
Approach Vol, veh/h		937	514	A	769	
Approach Delay, s/veh		25.2	21.4		37.2	
Approach LOS		C	C		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			51.4		38.0	8.8	42.6
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			62.5		33.5	6.4	51.6
Max Q Clear Time (g_c+I1), s			39.8		29.5	4.4	22.1
Green Ext Time (p_c), s			7.0		1.2	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	885	639	0	0	41
Future Vol, veh/h	0	885	639	0	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	98	73	73	92	32
Heavy Vehicles, %	2	5	5	2	2	20
Mvmt Flow	0	903	875	0	0	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	875
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.48
Pot Cap-1 Maneuver	0	-	-	0	0	324
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	324
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	324
HCM Lane V/C Ratio	-	-	0.395
HCM Control Delay (s)	-	-	23.2
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.8

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	886	63	17	466	9	26	3	19	7	2	17
Future Vol, veh/h	12	886	63	17	466	9	26	3	19	7	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	120	150	-	300	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	91	91	91	80	80	80	60	60	60
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	13	923	66	19	512	10	33	4	24	12	3	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	522	0	0	989	0	0	1520	1509	923	1546	1565	512
Stage 1	-	-	-	-	-	-	949	949	-	550	550	-
Stage 2	-	-	-	-	-	-	571	560	-	996	1015	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1044	-	-	699	-	-	97	120	327	93	111	562
Stage 1	-	-	-	-	-	-	313	339	-	519	516	-
Stage 2	-	-	-	-	-	-	506	511	-	294	316	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1044	-	-	699	-	-	87	115	327	82	107	562
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	115	-	82	107	-
Stage 1	-	-	-	-	-	-	309	335	-	513	502	-
Stage 2	-	-	-	-	-	-	464	497	-	266	312	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	57.9	26.9
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	125	1044	-	-	699	-	-	86	562
HCM Lane V/C Ratio	0.48	0.012	-	-	0.027	-	-	0.174	0.05
HCM Control Delay (s)	57.9	8.5	-	-	10.3	-	-	55.5	11.7
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	2.2	0	-	-	0.1	-	-	0.6	0.2

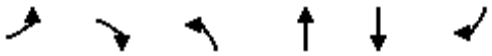
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	893	431	33	36	61
Future Vol, veh/h	19	893	431	33	36	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	230	-	-	300	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	91	91	70	70
Heavy Vehicles, %	20	5	5	20	20	20
Mvmt Flow	20	930	474	36	51	87

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	474	0	-	0	1444	474
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	970	-
Critical Hdwy	4.3	-	-	-	6.6	6.4
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.38	-	-	-	3.68	3.48
Pot Cap-1 Maneuver	1000	-	-	0	133	555
Stage 1	-	-	-	0	590	-
Stage 2	-	-	-	0	341	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1000	-	-	-	130	555
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	341	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1000	-	-	130	555
HCM Lane V/C Ratio	0.02	-	-	0.396	0.157
HCM Control Delay (s)	8.7	-	-	49.7	12.7
HCM Lane LOS	A	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	1.7	0.6



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	98	138	380	455	97
Future Volume (veh/h)	16	98	138	380	455	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	22	132	153	422	495	105
Peak Hour Factor	0.74	0.74	0.90	0.90	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	4	4
Cap, veh/h	216	192	537	1057	845	179
Arrive On Green	0.12	0.12	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1781	1585	819	1841	1472	312
Grp Volume(v), veh/h	22	132	153	422	0	600
Grp Sat Flow(s),veh/h/ln	1781	1585	819	1841	0	1785
Q Serve(g_s), s	0.3	2.4	4.4	3.7	0.0	6.4
Cycle Q Clear(g_c), s	0.3	2.4	10.7	3.7	0.0	6.4
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	216	192	537	1057	0	1025
V/C Ratio(X)	0.10	0.69	0.28	0.40	0.00	0.59
Avail Cap(c_a), veh/h	1476	1313	2047	4451	0	4315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.6	12.4	7.5	3.5	0.0	4.0
Incr Delay (d2), s/veh	0.2	4.3	0.3	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9	0.5	0.4	0.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.8	16.7	7.8	3.7	0.0	4.6
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	154			575	600	
Approach Delay, s/veh	16.0			4.8	4.6	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		21.5		8.1		21.5
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		71.5		24.5		71.5
Max Q Clear Time (g_c+I1), s		12.7		4.4		8.4
Green Ext Time (p_c), s		4.2		0.4		4.9

Intersection Summary	
HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	369	49	52	394	814	86	397	116	555	287	280
Future Volume (veh/h)	464	369	49	52	394	814	86	397	116	555	287	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	516	410	54	53	402	831	100	462	135	578	299	292
Peak Hour Factor	0.90	0.90	0.90	0.98	0.98	0.98	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	560	506	66	490	431	1142	370	552	468	618	812	677
Arrive On Green	0.16	0.16	0.16	0.24	0.23	0.23	0.04	0.30	0.30	0.18	0.43	0.43
Sat Flow, veh/h	3401	3109	407	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	516	229	235	53	402	831	100	462	135	578	299	292
Grp Sat Flow(s),veh/h/ln	1700	1749	1767	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	21.7	18.3	18.6	0.0	31.0	20.5	5.7	33.5	5.5	24.3	15.6	11.3
Cycle Q Clear(g_c), s	21.7	18.3	18.6	0.0	31.0	20.5	5.7	33.5	5.5	24.3	15.6	11.3
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	560	284	288	490	431	1142	370	552	468	618	812	677
V/C Ratio(X)	0.92	0.81	0.82	0.11	0.93	0.73	0.27	0.84	0.29	0.94	0.37	0.43
Avail Cap(c_a), veh/h	575	643	650	490	438	1152	370	552	468	622	812	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	58.5	58.6	41.7	54.4	15.0	33.7	47.8	13.1	58.5	27.6	10.3
Incr Delay (d2), s/veh	20.2	5.4	5.6	0.1	26.7	2.3	0.4	14.0	1.6	21.5	1.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	8.6	8.8	1.5	17.6	6.5	2.6	17.8	3.8	12.3	7.4	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	63.9	64.2	41.8	81.1	17.4	34.0	61.8	14.6	80.0	28.9	12.3
LnGrp LOS	E	E	E	D	F	B	C	E	B	E	C	B
Approach Vol, veh/h		980			1286			697			1169	
Approach Delay, s/veh		72.4			38.3			48.7			50.0	
Approach LOS		E			D			D			D	

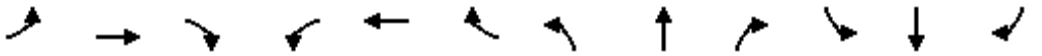
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.9	47.3	38.7	28.1	10.7	67.5	28.4	38.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	26.5	41.5	5.7	53.3	6.2	61.8	24.5	34.5
Max Q Clear Time (g_c+I1), s	26.3	35.5	2.0	20.6	7.7	17.6	23.7	33.0
Green Ext Time (p_c), s	0.1	1.7	0.0	3.0	0.0	3.1	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	589	16	20	1088	47	31
Future Volume (veh/h)	589	16	20	1088	47	31
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1870	1826	1826	1870	1870
Adj Flow Rate, veh/h	701	19	21	1145	52	34
Peak Hour Factor	0.84	0.84	0.95	0.95	0.90	0.90
Percent Heavy Veh, %	5	2	5	5	2	2
Cap, veh/h	1469	671	48	1409	874	778
Arrive On Green	0.42	0.42	0.42	0.42	0.49	0.49
Sat Flow, veh/h	3561	1585	30	3411	1781	1585
Grp Volume(v), veh/h	701	19	619	547	52	34
Grp Sat Flow(s),veh/h/ln	1735	1585	1779	1578	1781	1585
Q Serve(g_s), s	15.3	0.7	9.9	32.1	1.6	1.2
Cycle Q Clear(g_c), s	15.3	0.7	31.8	32.1	1.6	1.2
Prop In Lane		1.00	0.03		1.00	1.00
Lane Grp Cap(c), veh/h	1469	671	789	668	874	778
V/C Ratio(X)	0.48	0.03	0.78	0.82	0.06	0.04
Avail Cap(c_a), veh/h	2395	1094	1252	1090	874	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	17.7	26.5	26.7	14.0	13.9
Incr Delay (d2), s/veh	0.2	0.0	1.8	2.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.3	13.5	12.2	0.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.1	17.7	28.2	29.3	14.1	14.0
LnGrp LOS	C	B	C	C	B	B
Approach Vol, veh/h	720			1166	86	
Approach Delay, s/veh	22.0			28.7	14.1	
Approach LOS	C			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	56.0	49.0	49.0
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	23.5	72.5	72.5
Max Q Clear Time (g_c+I1), s	3.6	17.3	34.1
Green Ext Time (p_c), s	0.2	5.9	10.3

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	529	53	145	448	684	32	266	203	1223	616	473
Future Volume (veh/h)	419	529	53	145	448	684	32	266	203	1223	616	473
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	451	569	57	148	457	698	34	280	214	1287	648	498
Peak Hour Factor	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	434	658	66	351	438	1628	172	290	246	1208	906	756
Arrive On Green	0.13	0.21	0.21	0.16	0.24	0.24	0.03	0.16	0.16	0.36	0.48	0.48
Sat Flow, veh/h	3401	3211	321	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	451	309	317	148	457	698	34	280	214	1287	648	498
Grp Sat Flow(s),veh/h/ln	1700	1749	1783	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	18.5	24.8	24.9	5.2	34.5	9.2	2.3	21.6	14.1	51.5	39.6	22.1
Cycle Q Clear(g_c), s	18.5	24.8	24.9	5.2	34.5	9.2	2.3	21.6	14.1	51.5	39.6	22.1
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	434	359	366	351	438	1628	172	290	246	1208	906	756
V/C Ratio(X)	1.04	0.86	0.87	0.42	1.04	0.43	0.20	0.96	0.87	1.07	0.71	0.66
Avail Cap(c_a), veh/h	434	451	460	351	438	1628	187	290	246	1208	906	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.3	55.7	55.7	52.0	55.3	5.8	49.6	60.9	32.5	46.7	29.5	11.3
Incr Delay (d2), s/veh	53.8	13.2	13.3	0.8	54.8	0.2	0.6	44.6	31.8	45.2	4.8	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	12.3	12.6	4.8	22.6	2.2	1.1	13.8	7.7	29.2	18.9	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.0	68.8	69.0	52.8	110.0	6.0	50.1	105.4	64.2	92.0	34.3	15.8
LnGrp LOS	F	E	E	D	F	A	D	F	E	F	C	B
Approach Vol, veh/h		1077			1303			528			2433	
Approach Delay, s/veh		89.1			47.8			85.2			61.0	
Approach LOS		F			D			F			E	

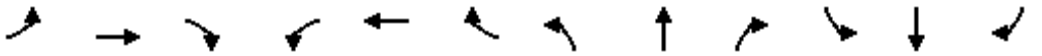
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	27.0	27.8	34.2	8.2	74.8	23.0	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	51.5	22.5	15.6	37.4	5.0	69.0	18.5	34.5
Max Q Clear Time (g_c+I1), s	53.5	23.6	7.2	26.9	4.3	41.6	20.5	36.5
Green Ext Time (p_c), s	0.0	0.0	0.2	2.8	0.0	7.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.8
HCM 6th LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1212	179	108	1124	207	105
Future Volume (veh/h)	1212	179	108	1124	207	105
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1826	1870	1870
Adj Flow Rate, veh/h	1249	185	117	1222	218	111
Peak Hour Factor	0.97	0.97	0.92	0.92	0.95	0.95
Percent Heavy Veh, %	5	5	2	5	2	2
Cap, veh/h	2020	297	239	2310	420	373
Arrive On Green	0.67	0.67	0.67	0.67	0.24	0.24
Sat Flow, veh/h	3125	447	373	3561	1781	1585
Grp Volume(v), veh/h	711	723	117	1222	218	111
Grp Sat Flow(s),veh/h/ln	1735	1745	373	1735	1781	1585
Q Serve(g_s), s	21.2	21.6	23.8	16.6	9.7	5.3
Cycle Q Clear(g_c), s	21.2	21.6	45.4	16.6	9.7	5.3
Prop In Lane		0.26	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1155	1162	239	2310	420	373
V/C Ratio(X)	0.62	0.62	0.49	0.53	0.52	0.30
Avail Cap(c_a), veh/h	1416	1425	295	2832	420	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	8.7	21.6	7.9	30.4	28.7
Incr Delay (d2), s/veh	0.5	0.6	1.5	0.2	4.5	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	7.1	2.1	5.3	4.6	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	9.3	23.2	8.1	34.9	30.7
LnGrp LOS	A	A	C	A	C	C
Approach Vol, veh/h	1434			1339	329	
Approach Delay, s/veh	9.2			9.4	33.5	
Approach LOS	A			A	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	26.0	65.3	65.3
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	21.5	74.5	74.5
Max Q Clear Time (g_c+I1), s	11.7	23.6	47.4
Green Ext Time (p_c), s	0.7	15.6	13.4

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1243	266	75	810	16	131	11	77	49	13	67
Future Volume (veh/h)	52	1243	266	75	810	16	131	11	77	49	13	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	1295	277	81	871	17	158	13	93	57	15	78
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.83	0.83	0.83	0.86	0.86	0.86
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	355	1669	763	226	1695	774	439	589	499	482	83	429
Arrive On Green	0.04	0.48	0.48	0.05	0.49	0.49	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3469	1585	1781	3469	1585	1303	1870	1585	1288	262	1363
Grp Volume(v), veh/h	54	1295	277	81	871	17	158	13	93	57	0	93
Grp Sat Flow(s),veh/h/ln	1781	1735	1585	1781	1735	1585	1303	1870	1585	1288	0	1625
Q Serve(g_s), s	1.3	27.0	9.6	2.0	15.0	0.5	8.8	0.4	3.7	2.8	0.0	3.6
Cycle Q Clear(g_c), s	1.3	27.0	9.6	2.0	15.0	0.5	12.4	0.4	3.7	3.2	0.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.84
Lane Grp Cap(c), veh/h	355	1669	763	226	1695	774	439	589	499	482	0	512
V/C Ratio(X)	0.15	0.78	0.36	0.36	0.51	0.02	0.36	0.02	0.19	0.12	0.00	0.18
Avail Cap(c_a), veh/h	393	2245	1026	292	2324	1062	439	589	499	482	0	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	18.8	14.2	15.6	15.2	11.5	26.2	20.6	21.8	21.7	0.0	21.7
Incr Delay (d2), s/veh	0.2	1.2	0.3	1.0	0.2	0.0	2.3	0.1	0.8	0.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	10.3	3.3	0.8	5.6	0.2	2.9	0.2	1.5	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	20.0	14.5	16.6	15.5	11.6	28.5	20.7	22.6	22.2	0.0	22.5
LnGrp LOS	B	B	B	B	B	B	C	C	C	C	A	C
Approach Vol, veh/h		1626			969			264			150	
Approach Delay, s/veh		18.8			15.5			26.0			22.4	
Approach LOS		B			B			C			C	

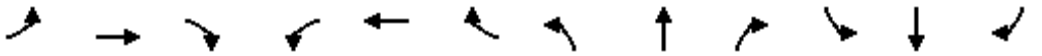
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	8.8	46.5		32.0	8.2	47.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	7.5	56.5		27.5	5.5	58.5				
Max Q Clear Time (g_c+I1), s		14.4	4.0	29.0		5.6	3.3	17.0				
Green Ext Time (p_c), s		0.7	0.0	13.0		0.7	0.0	7.7				

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	49.3
Intersection LOS	E

Approach	EB	WB	NB
Entry Lanes	2	2	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	1524	967	75
Demand Flow Rate, veh/h	1598	1015	77
Vehicles Circulating, veh/h	32	31	1530
Vehicles Exiting, veh/h	1014	1576	100
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	73.5	13.6	18.6
Approach LOS	F	B	C

Lane	Left	Right	Left	Left
Designated Moves	LT	R	LT	LR
Assumed Moves	LT	R	LT	LR
RT Channelized				
Lane Util	0.957	0.043	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.609
Critical Headway, s	4.544	4.544	4.544	4.976
Entry Flow, veh/h	1530	68	1015	77
Cap Entry Lane, veh/h	1379	1379	1381	290
Entry HV Adj Factor	0.952	0.985	0.953	0.974
Flow Entry, veh/h	1457	67	967	75
Cap Entry, veh/h	1314	1359	1316	282
V/C Ratio	1.109	0.049	0.735	0.266
Control Delay, s/veh	76.7	3.0	13.6	18.6
LOS	F	A	B	C
95th %tile Queue, veh	34	0	7	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	465	909	93	29	456	89	72	156	43	248	272	340
Future Volume (veh/h)	465	909	93	29	456	89	72	156	43	248	272	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1870	1870	1826	1856	1870	1870	1870	1870	1870	1841
Adj Flow Rate, veh/h	470	918	94	31	490	96	82	177	49	267	292	0
Peak Hour Factor	0.99	0.99	0.99	0.93	0.93	0.93	0.88	0.88	0.88	0.93	0.93	0.93
Percent Heavy Veh, %	4	5	2	2	5	3	2	2	2	2	2	4
Cap, veh/h	494	1024	889	145	520	448	276	287	79	335	446	
Arrive On Green	0.23	0.56	0.56	0.29	0.29	0.29	0.05	0.20	0.20	0.09	0.24	0.00
Sat Flow, veh/h	1753	1826	1585	557	1826	1572	1781	1410	390	1781	1870	1560
Grp Volume(v), veh/h	470	918	94	31	490	96	82	0	226	267	292	0
Grp Sat Flow(s),veh/h/ln	1753	1826	1585	557	1826	1572	1781	0	1800	1781	1870	1560
Q Serve(g_s), s	18.6	39.9	2.5	4.7	23.6	4.2	3.2	0.0	10.3	7.7	12.7	0.0
Cycle Q Clear(g_c), s	18.6	39.9	2.5	19.8	23.6	4.2	3.2	0.0	10.3	7.7	12.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	494	1024	889	145	520	448	276	0	366	335	446	
V/C Ratio(X)	0.95	0.90	0.11	0.21	0.94	0.21	0.30	0.00	0.62	0.80	0.65	
Avail Cap(c_a), veh/h	494	1025	890	145	522	449	285	0	366	335	446	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.3	17.4	9.2	37.2	31.4	24.5	26.8	0.0	32.6	30.4	30.9	0.0
Incr Delay (d2), s/veh	28.4	10.4	0.1	0.7	25.6	0.2	0.6	0.0	7.6	12.5	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	17.9	0.8	0.7	13.7	1.6	1.4	0.0	5.2	3.1	6.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	27.9	9.3	37.9	57.0	24.7	27.4	0.0	40.2	42.9	38.2	0.0
LnGrp LOS	D	C	A	D	E	C	C	A	D	D	D	
Approach Vol, veh/h		1482			617			308			559	A
Approach Delay, s/veh		34.3			51.0			36.8			40.5	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	22.8		54.9	9.1	25.9	24.8	30.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.7	18.3		50.5	5.0	21.0	20.3	25.7				
Max Q Clear Time (g_c+I1), s	9.7	12.3		41.9	5.2	14.7	20.6	25.6				
Green Ext Time (p_c), s	0.0	0.6		4.6	0.0	0.8	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			39.2									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

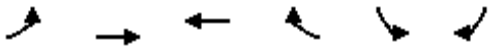
Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1115	61	3	511	23	17
Future Vol, veh/h	1115	61	3	511	23	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	97	97	69	69
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	1267	69	3	527	33	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1336	0	1835	1302
Stage 1	-	-	-	-	1302	-
Stage 2	-	-	-	-	533	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	516	-	83	196
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	516	-	83	196
Mov Cap-2 Maneuver	-	-	-	-	83	-
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	69.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	110	-	-	516	-
HCM Lane V/C Ratio	0.527	-	-	0.006	-
HCM Control Delay (s)	69.5	-	-	12	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	2.4	-	-	0	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	74	826	468	42	135	188
Future Volume (veh/h)	74	826	468	42	135	188
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1604	1826	1826	1604	1604	1604
Adj Flow Rate, veh/h	77	860	514	0	321	448
Peak Hour Factor	0.96	0.96	0.91	0.91	0.42	0.42
Percent Heavy Veh, %	20	5	5	20	20	20
Cap, veh/h	307	958	779		572	509
Arrive On Green	0.05	0.52	0.43	0.00	0.37	0.37
Sat Flow, veh/h	1527	1826	1826	1359	1527	1359
Grp Volume(v), veh/h	77	860	514	0	321	448
Grp Sat Flow(s),veh/h/ln	1527	1826	1826	1359	1527	1359
Q Serve(g_s), s	2.4	37.8	20.1	0.0	14.9	27.5
Cycle Q Clear(g_c), s	2.4	37.8	20.1	0.0	14.9	27.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	307	958	779		572	509
V/C Ratio(X)	0.25	0.90	0.66		0.56	0.88
Avail Cap(c_a), veh/h	343	1277	1054		572	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	19.1	20.5	0.0	22.1	26.1
Incr Delay (d2), s/veh	0.4	7.0	1.0	0.0	3.9	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	16.3	8.3	0.0	5.8	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.4	26.1	21.4	0.0	26.1	45.1
LnGrp LOS	B	C	C		C	D
Approach Vol, veh/h		937	514	A	769	
Approach Delay, s/veh		25.2	21.4		37.2	
Approach LOS		C	C		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			51.4		38.0	8.8	42.6
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			62.5		33.5	6.4	51.6
Max Q Clear Time (g_c+I1), s			39.8		29.5	4.4	22.1
Green Ext Time (p_c), s			7.0		1.2	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	885	639	0	0	41
Future Vol, veh/h	0	885	639	0	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	98	73	73	92	32
Heavy Vehicles, %	2	5	5	2	2	20
Mvmt Flow	0	903	875	0	0	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	875
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.48
Pot Cap-1 Maneuver	0	-	-	0	0	324
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	324
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	324
HCM Lane V/C Ratio	-	-	0.395
HCM Control Delay (s)	-	-	23.2
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.8

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	886	63	17	466	9	26	3	19	7	2	17
Future Vol, veh/h	12	886	63	17	466	9	26	3	19	7	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	120	150	-	300	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	91	91	91	80	80	80	60	60	60
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	13	923	66	19	512	10	33	4	24	12	3	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	522	0	0	989	0	0	1520	1509	923	1546	1565	512
Stage 1	-	-	-	-	-	-	949	949	-	550	550	-
Stage 2	-	-	-	-	-	-	571	560	-	996	1015	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1044	-	-	699	-	-	97	120	327	93	111	562
Stage 1	-	-	-	-	-	-	313	339	-	519	516	-
Stage 2	-	-	-	-	-	-	506	511	-	294	316	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1044	-	-	699	-	-	87	115	327	82	107	562
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	115	-	82	107	-
Stage 1	-	-	-	-	-	-	309	335	-	513	502	-
Stage 2	-	-	-	-	-	-	464	497	-	266	312	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	57.9	26.9
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	125	1044	-	-	699	-	-	86	562
HCM Lane V/C Ratio	0.48	0.012	-	-	0.027	-	-	0.174	0.05
HCM Control Delay (s)	57.9	8.5	-	-	10.3	-	-	55.5	11.7
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	2.2	0	-	-	0.1	-	-	0.6	0.2

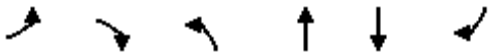
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	893	431	33	36	61
Future Vol, veh/h	19	893	431	33	36	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	230	-	-	300	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	91	91	70	70
Heavy Vehicles, %	20	5	5	20	20	20
Mvmt Flow	20	930	474	36	51	87

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	474	0	-	0	1444	474
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	970	-
Critical Hdwy	4.3	-	-	-	6.6	6.4
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.38	-	-	-	3.68	3.48
Pot Cap-1 Maneuver	1000	-	-	0	133	555
Stage 1	-	-	-	0	590	-
Stage 2	-	-	-	0	341	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1000	-	-	-	130	555
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	341	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1000	-	-	130	555
HCM Lane V/C Ratio	0.02	-	-	0.396	0.157
HCM Control Delay (s)	8.7	-	-	49.7	12.7
HCM Lane LOS	A	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	1.7	0.6



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	297	117	557	507	97
Future Volume (veh/h)	88	297	117	557	507	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	105	354	130	619	534	102
Peak Hour Factor	0.84	0.84	0.90	0.90	0.95	0.95
Percent Heavy Veh, %	2	2	2	4	4	4
Cap, veh/h	492	437	377	1007	822	157
Arrive On Green	0.28	0.28	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1781	1585	792	1841	1502	287
Grp Volume(v), veh/h	105	354	130	619	0	636
Grp Sat Flow(s),veh/h/ln	1781	1585	792	1841	0	1789
Q Serve(g_s), s	2.3	10.6	7.0	11.7	0.0	12.7
Cycle Q Clear(g_c), s	2.3	10.6	19.7	11.7	0.0	12.7
Prop In Lane	1.00	1.00	1.00			0.16
Lane Grp Cap(c), veh/h	492	437	377	1007	0	979
V/C Ratio(X)	0.21	0.81	0.34	0.61	0.00	0.65
Avail Cap(c_a), veh/h	1067	949	962	2367	0	2301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	17.2	15.0	7.9	0.0	8.1
Incr Delay (d2), s/veh	0.2	3.6	0.5	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	1.2	3.5	0.0	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	20.8	15.6	8.5	0.0	8.8
LnGrp LOS	B	C	B	A	A	A
Approach Vol, veh/h	459			749	636	
Approach Delay, s/veh	19.3			9.7	8.8	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		32.4		18.6		32.4
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		65.5		30.5		65.5
Max Q Clear Time (g_c+I1), s		21.7		12.6		14.7
Green Ext Time (p_c), s		6.1		1.5		5.3

Intersection Summary		
HCM 6th Ctrl Delay		11.8
HCM 6th LOS		B

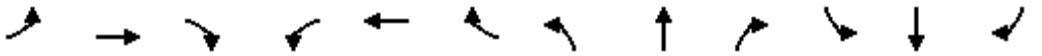
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1384	64	29	880	20	30
Future Volume (veh/h)	1384	64	29	880	20	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1870	1826	1826	1870	1870
Adj Flow Rate, veh/h	1457	67	31	936	30	45
Peak Hour Factor	0.95	0.95	0.94	0.94	0.67	0.67
Percent Heavy Veh, %	5	2	5	5	2	2
Cap, veh/h	1798	821	52	1425	705	628
Arrive On Green	0.52	0.52	0.52	0.52	0.40	0.40
Sat Flow, veh/h	3561	1585	30	2833	1781	1585
Grp Volume(v), veh/h	1457	67	485	482	30	45
Grp Sat Flow(s),veh/h/ln	1735	1585	1201	1578	1781	1585
Q Serve(g_s), s	36.6	2.2	7.6	22.2	1.1	1.9
Cycle Q Clear(g_c), s	36.6	2.2	44.2	22.2	1.1	1.9
Prop In Lane		1.00	0.06		1.00	1.00
Lane Grp Cap(c), veh/h	1798	821	659	818	705	628
V/C Ratio(X)	0.81	0.08	0.74	0.59	0.04	0.07
Avail Cap(c_a), veh/h	2461	1125	930	1120	705	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	12.7	18.2	17.5	19.5	19.7
Incr Delay (d2), s/veh	1.5	0.0	1.9	0.7	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	0.8	7.7	7.9	0.5	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.5	12.8	20.0	18.2	19.6	19.9
LnGrp LOS	C	B	C	B	B	B
Approach Vol, veh/h	1524			967	75	
Approach Delay, s/veh	22.1			19.1	19.8	
Approach LOS	C			B	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	46.1	58.9	58.9
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	21.5	74.5	74.5
Max Q Clear Time (g_c+I1), s	3.9	38.6	46.2
Green Ext Time (p_c), s	0.1	15.8	7.9

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Appendix E

Future Intersection Operational Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	385	49	65	418	911	86	397	128	605	287	280
Future Volume (veh/h)	464	385	49	65	418	911	86	397	128	605	287	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	516	428	54	66	427	930	100	462	149	630	299	292
Peak Hour Factor	0.90	0.90	0.90	0.98	0.98	0.98	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	551	526	66	493	449	1210	353	511	433	668	797	665
Arrive On Green	0.16	0.17	0.17	0.24	0.24	0.24	0.04	0.27	0.27	0.20	0.43	0.43
Sat Flow, veh/h	3401	3126	392	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	516	238	244	66	427	930	100	462	149	630	299	292
Grp Sat Flow(s),veh/h/ln	1700	1749	1770	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	21.7	19.0	19.3	0.0	33.1	22.6	5.9	34.6	6.4	26.5	15.8	11.7
Cycle Q Clear(g_c), s	21.7	19.0	19.3	0.0	33.1	22.6	5.9	34.6	6.4	26.5	15.8	11.7
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	551	294	298	493	449	1210	353	511	433	668	797	665
V/C Ratio(X)	0.94	0.81	0.82	0.13	0.95	0.77	0.28	0.90	0.34	0.94	0.38	0.44
Avail Cap(c_a), veh/h	551	638	646	493	451	1212	353	511	433	668	797	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	58.1	58.2	41.6	53.9	14.2	35.9	50.9	14.6	57.4	28.4	10.9
Incr Delay (d2), s/veh	23.6	5.3	5.5	0.1	30.1	3.1	0.4	22.0	2.2	21.8	1.3	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	8.9	9.1	1.9	19.1	7.1	2.6	19.3	2.6	13.4	7.5	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.6	63.4	63.7	41.8	84.0	17.3	36.3	72.8	16.7	79.3	29.8	13.0
LnGrp LOS	F	E	E	D	F	B	D	E	B	E	C	B
Approach Vol, veh/h		998			1423			711			1221	
Approach Delay, s/veh		73.9			38.4			55.9			51.3	
Approach LOS		E			D			E			D	

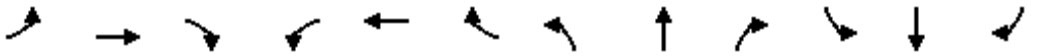
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	44.1	39.0	28.9	10.8	66.3	28.0	39.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	28.5	39.5	6.1	52.9	6.3	61.7	23.5	35.5
Max Q Clear Time (g_c+I1), s	28.5	36.6	2.0	21.3	7.9	17.8	23.7	35.1
Green Ext Time (p_c), s	0.0	1.0	0.0	3.1	0.0	3.1	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	780	81	70	1282	119	98
Future Volume (veh/h)	780	81	70	1282	119	98
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1826	1870	1870
Adj Flow Rate, veh/h	897	93	76	1393	153	126
Peak Hour Factor	0.87	0.87	0.92	0.92	0.78	0.78
Percent Heavy Veh, %	5	5	2	5	2	2
Cap, veh/h	1763	183	312	1927	579	515
Arrive On Green	0.56	0.56	0.56	0.56	0.33	0.33
Sat Flow, veh/h	3264	329	569	3561	1781	1585
Grp Volume(v), veh/h	490	500	76	1393	153	126
Grp Sat Flow(s),veh/h/ln	1735	1767	569	1735	1781	1585
Q Serve(g_s), s	13.2	13.2	7.2	22.5	4.8	4.4
Cycle Q Clear(g_c), s	13.2	13.2	20.4	22.5	4.8	4.4
Prop In Lane		0.19	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	964	982	312	1927	579	515
V/C Ratio(X)	0.51	0.51	0.24	0.72	0.26	0.24
Avail Cap(c_a), veh/h	1645	1676	535	3291	579	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.4	10.4	16.7	12.4	18.8	18.7
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.5	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	4.6	0.9	7.6	2.1	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.8	10.8	17.1	13.0	19.9	19.8
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	990			1469	279	
Approach Delay, s/veh	10.8			13.2	19.8	
Approach LOS	B			B	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	29.0	46.4	46.4
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	24.5	71.5	71.5
Max Q Clear Time (g_c+I1), s	6.8	15.2	24.5
Green Ext Time (p_c), s	0.8	8.3	17.4

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	651	81	92	1199	11	181	16	98	8	0	19
Future Volume (veh/h)	28	651	81	92	1199	11	181	16	98	8	0	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	740	92	99	1289	12	266	24	144	14	0	33
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.68	0.68	0.68	0.58	0.58	0.58
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	184	1496	683	348	1563	714	574	700	594	523	0	594
Arrive On Green	0.03	0.43	0.43	0.05	0.45	0.45	0.37	0.37	0.37	0.37	0.00	0.37
Sat Flow, veh/h	1781	3469	1585	1781	3469	1585	1376	1870	1585	1217	0	1585
Grp Volume(v), veh/h	32	740	92	99	1289	12	266	24	144	14	0	33
Grp Sat Flow(s),veh/h/ln	1781	1735	1585	1781	1735	1585	1376	1870	1585	1217	0	1585
Q Serve(g_s), s	0.9	14.4	3.3	2.8	30.3	0.4	14.3	0.8	5.8	0.7	0.0	1.2
Cycle Q Clear(g_c), s	0.9	14.4	3.3	2.8	30.3	0.4	15.5	0.8	5.8	1.4	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	1496	683	348	1563	714	574	700	594	523	0	594
V/C Ratio(X)	0.17	0.49	0.13	0.28	0.82	0.02	0.46	0.03	0.24	0.03	0.00	0.06
Avail Cap(c_a), veh/h	228	1884	861	375	1917	876	574	700	594	523	0	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.5	19.2	16.0	14.6	22.4	14.2	23.6	18.5	20.1	18.9	0.0	18.6
Incr Delay (d2), s/veh	0.4	0.3	0.1	0.4	2.6	0.0	2.7	0.1	1.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.6	1.2	1.1	12.2	0.1	4.9	0.3	2.3	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	19.4	16.1	15.1	25.0	14.2	26.2	18.6	21.0	19.0	0.0	18.8
LnGrp LOS	B	B	B	B	C	B	C	B	C	B	A	B
Approach Vol, veh/h		864			1400			434			47	
Approach Delay, s/veh		19.1			24.2			24.1			18.9	
Approach LOS		B			C			C			B	

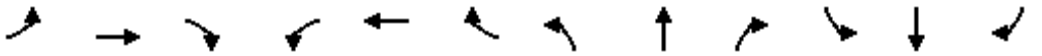
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		39.4	9.1	44.7		39.4	7.3	46.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		34.9	6.0	50.6		34.9	5.1	51.5				
Max Q Clear Time (g_c+I1), s		17.5	4.8	16.4		3.4	2.9	32.3				
Green Ext Time (p_c), s		1.3	0.0	6.3		0.2	0.0	9.7				

Intersection Summary												
HCM 6th Ctrl Delay			22.4									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	51.1
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	841	1263	89	165
Demand Flow Rate, veh/h	878	1325	91	168
Vehicles Circulating, veh/h	128	211	962	1371
Vehicles Exiting, veh/h	1411	842	43	165
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	12.2	85.0	9.5	12.7
Approach LOS	B	F	A	B

Lane	Left	Right	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT	R	LT	R	LTR	LT	R
RT Channelized							
Lane Util	0.978	0.022	0.995	0.005	1.000	0.637	0.363
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.976	4.544	4.544
Entry Flow, veh/h	859	19	1318	7	91	107	61
Cap Entry Lane, veh/h	1264	1264	1172	1172	517	408	408
Entry HV Adj Factor	0.957	1.000	0.953	1.000	0.977	0.981	0.984
Flow Entry, veh/h	822	19	1256	7	89	105	60
Cap Entry, veh/h	1210	1264	1117	1172	506	400	401
V/C Ratio	0.680	0.015	1.125	0.006	0.176	0.262	0.150
Control Delay, s/veh	12.4	3.0	85.4	3.1	9.5	13.5	11.3
LOS	B	A	F	A	A	B	B
95th %tile Queue, veh	6	0	32	0	1	1	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	497	29	61	705	174	104	114	80	210	126	411
Future Volume (veh/h)	263	497	29	61	705	174	104	114	80	210	126	411
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1870	1870	1826	1856	1870	1870	1870	1870	1870	1841
Adj Flow Rate, veh/h	274	518	30	64	742	183	112	123	86	216	130	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.93	0.93	0.93	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	2	2	5	3	2	2	2	2	2	4
Cap, veh/h	299	1071	930	440	765	659	367	210	146	297	387	
Arrive On Green	0.12	0.59	0.59	0.42	0.42	0.42	0.06	0.20	0.20	0.06	0.21	0.00
Sat Flow, veh/h	1753	1826	1585	859	1826	1572	1781	1025	717	1781	1870	1560
Grp Volume(v), veh/h	274	518	30	64	742	183	112	0	209	216	130	0
Grp Sat Flow(s),veh/h/ln	1753	1826	1585	859	1826	1572	1781	0	1741	1781	1870	1560
Q Serve(g_s), s	9.1	14.7	0.7	4.2	35.8	6.9	4.5	0.0	9.8	5.3	5.3	0.0
Cycle Q Clear(g_c), s	9.1	14.7	0.7	4.2	35.8	6.9	4.5	0.0	9.8	5.3	5.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	299	1071	930	440	765	659	367	0	356	297	387	
V/C Ratio(X)	0.92	0.48	0.03	0.15	0.97	0.28	0.31	0.00	0.59	0.73	0.34	
Avail Cap(c_a), veh/h	299	1071	930	440	765	659	367	0	356	297	387	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.0	10.7	7.8	16.4	25.6	17.2	26.4	0.0	32.4	32.5	30.4	0.0
Incr Delay (d2), s/veh	31.3	0.3	0.0	0.2	25.3	0.2	0.5	0.0	6.9	8.6	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	5.5	0.2	0.8	19.9	2.5	1.9	0.0	4.7	2.7	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	11.1	7.9	16.6	50.9	17.4	26.8	0.0	39.3	41.1	32.8	0.0
LnGrp LOS	E	B	A	B	D	B	C	A	D	D	C	
Approach Vol, veh/h		822			989			321			346	A
Approach Delay, s/veh		25.7			42.5			35.0			38.0	
Approach LOS		C			D			C			D	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	22.9		57.3	9.6	23.1	15.1	42.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.3	18.4		52.8	5.1	18.6	10.6	37.7				
Max Q Clear Time (g_c+I1), s	7.3	11.8		16.7	6.5	7.3	11.1	37.8				
Green Ext Time (p_c), s	0.0	0.6		3.9	0.0	0.4	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

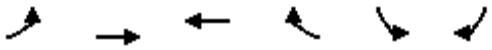
Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	742	14	21	894	22	53
Future Vol, veh/h	742	14	21	894	22	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	87	87	55	55
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	834	16	24	1028	40	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	850	0	1918	842
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	1076	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	788	-	74	364
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	788	-	72	364
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	327	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	84.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	166	-	-	788	-
HCM Lane V/C Ratio	0.821	-	-	0.031	-
HCM Control Delay (s)	84.7	-	-	9.7	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	5.5	-	-	0.1	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	387	401	614	144	85	150
Future Volume (veh/h)	387	401	614	144	85	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1604	1826	1826	1604	1604	1604
Adj Flow Rate, veh/h	395	409	667	157	131	231
Peak Hour Factor	0.98	0.98	0.92	0.92	0.65	0.65
Percent Heavy Veh, %	20	5	5	20	20	20
Cap, veh/h	435	1219	757	564	346	308
Arrive On Green	0.20	0.67	0.41	0.41	0.23	0.23
Sat Flow, veh/h	1527	1826	1826	1359	1527	1359
Grp Volume(v), veh/h	395	409	667	157	131	231
Grp Sat Flow(s),veh/h/ln	1527	1826	1826	1359	1527	1359
Q Serve(g_s), s	14.1	8.2	28.7	6.5	6.2	13.5
Cycle Q Clear(g_c), s	14.1	8.2	28.7	6.5	6.2	13.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	435	1219	757	564	346	308
V/C Ratio(X)	0.91	0.34	0.88	0.28	0.38	0.75
Avail Cap(c_a), veh/h	604	1644	980	729	346	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	6.1	23.0	16.5	27.9	30.7
Incr Delay (d2), s/veh	14.1	0.2	7.7	0.3	3.1	15.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	2.7	13.1	2.0	2.5	11.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.2	6.2	30.7	16.8	31.0	46.1
LnGrp LOS	C	A	C	B	C	D
Approach Vol, veh/h		804	824		362	
Approach Delay, s/veh		20.0	28.0		40.6	
Approach LOS		B	C		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			61.4		23.8	21.6	39.8
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			76.7		19.3	26.5	45.7
Max Q Clear Time (g_c+I1), s			10.2		15.5	16.1	30.7
Green Ext Time (p_c), s			2.9		0.5	1.0	4.6

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	771	798	0	0	108
Future Vol, veh/h	0	771	798	0	0	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	95	85	85	92	73
Heavy Vehicles, %	2	5	5	2	2	20
Mvmt Flow	0	812	939	0	0	148

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	939
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.48
Pot Cap-1 Maneuver	0	-	-	0	0	297
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	297
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	28.6
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	297
HCM Lane V/C Ratio	-	-	0.498
HCM Control Delay (s)	-	-	28.6
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	2.6

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	463	17	8	637	29	55	3	18	19	2	66
Future Vol, veh/h	72	463	17	8	637	29	55	3	18	19	2	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	120	150	-	300	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	92	92	92	85	85	85	70	70	70
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	73	472	17	9	692	32	65	4	21	27	3	94

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	724	0	0	489	0	0	1393	1360	472	1349	1345	692
Stage 1	-	-	-	-	-	-	618	618	-	710	710	-
Stage 2	-	-	-	-	-	-	775	742	-	639	635	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	879	-	-	1074	-	-	119	148	592	128	151	444
Stage 1	-	-	-	-	-	-	477	481	-	424	437	-
Stage 2	-	-	-	-	-	-	391	422	-	464	472	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	879	-	-	1074	-	-	86	135	592	113	137	444
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	135	-	113	137	-
Stage 1	-	-	-	-	-	-	437	441	-	389	434	-
Stage 2	-	-	-	-	-	-	303	419	-	407	433	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.1	112.9	23
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	110	879	-	-	1074	-	-	115	444
HCM Lane V/C Ratio	0.813	0.084	-	-	0.008	-	-	0.261	0.212
HCM Control Delay (s)	112.9	9.5	-	-	8.4	-	-	47	15.3
HCM Lane LOS	F	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	4.6	0.3	-	-	0	-	-	1	0.8

Intersection	
Int Delay, s/veh	15.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	292	208	416	114	85	257
Future Vol, veh/h	292	208	416	114	85	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	230	-	-	300	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	92	92	81	81
Heavy Vehicles, %	20	5	5	20	20	20
Mvmt Flow	298	212	452	124	105	317

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	452	0	-	0	1260	452
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	808	-
Critical Hdwy	4.3	-	-	-	6.6	6.4
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.38	-	-	-	3.68	3.48
Pot Cap-1 Maneuver	1020	-	-	0	173	572
Stage 1	-	-	-	0	605	-
Stage 2	-	-	-	0	409	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1020	-	-	-	122	572
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	409	-

Approach	EB	WB	SB
HCM Control Delay, s	5.8	0	42.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1020	-	-	122	572
HCM Lane V/C Ratio	0.292	-	-	0.86	0.555
HCM Control Delay (s)	10	-	-	114.5	18.8
HCM Lane LOS	A	-	-	F	C
HCM 95th %tile Q(veh)	1.2	-	-	5.3	3.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	707	1270	5	0	35
Future Vol, veh/h	0	707	1270	5	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	84	95	95	92	80
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	0	842	1337	5	0	44

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	669
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	400
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	400
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	400
HCM Lane V/C Ratio	-	-	-	0.109
HCM Control Delay (s)	-	-	-	15.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	780	1136	54	0	83
Future Vol, veh/h	0	780	1136	54	0	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	84	95	95	92	90
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	0	929	1196	57	0	92

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	598
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	445
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	445
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	445
HCM Lane V/C Ratio	-	-	-	0.207
HCM Control Delay (s)	-	-	-	15.2
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.8

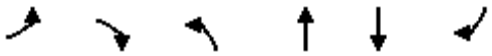
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	73	0	566	677	49
Future Vol, veh/h	0	73	0	566	677	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	85	92	93	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	86	0	609	698	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	698	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	440	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	440	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

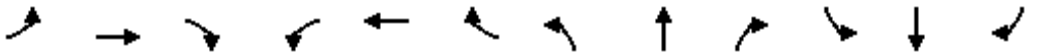
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	440	-	-
HCM Lane V/C Ratio	-	0.195	-	-
HCM Control Delay (s)	-	15.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	109	154	399	469	97
Future Volume (veh/h)	16	109	154	399	469	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	22	147	171	443	510	105
Peak Hour Factor	0.74	0.74	0.90	0.90	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	4	4
Cap, veh/h	230	205	527	1086	874	180
Arrive On Green	0.13	0.13	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1781	1585	807	1841	1481	305
Grp Volume(v), veh/h	22	147	171	443	0	615
Grp Sat Flow(s),veh/h/ln	1781	1585	807	1841	0	1786
Q Serve(g_s), s	0.3	2.9	5.4	4.2	0.0	6.9
Cycle Q Clear(g_c), s	0.3	2.9	12.3	4.2	0.0	6.9
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	230	205	527	1086	0	1054
V/C Ratio(X)	0.10	0.72	0.32	0.41	0.00	0.58
Avail Cap(c_a), veh/h	1361	1211	1851	4104	0	3981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	13.4	7.9	3.5	0.0	4.1
Incr Delay (d2), s/veh	0.2	4.7	0.4	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.1	0.6	0.5	0.0	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	18.1	8.3	3.8	0.0	4.6
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	169			614	615	
Approach Delay, s/veh	17.3			5.0	4.6	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		23.4		8.6		23.4
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		71.5		24.5		71.5
Max Q Clear Time (g_c+I1), s		14.3		4.9		8.9
Green Ext Time (p_c), s		4.6		0.5		5.1

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	385	49	65	418	911	86	397	128	605	287	280
Future Volume (veh/h)	464	385	49	65	418	911	86	397	128	605	287	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	516	428	54	66	427	930	100	462	149	630	299	292
Peak Hour Factor	0.90	0.90	0.90	0.98	0.98	0.98	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	548	569	71	495	440	1022	362	499	423	659	641	535
Arrive On Green	0.16	0.18	0.18	0.22	0.24	0.24	0.06	0.27	0.27	0.13	0.34	0.34
Sat Flow, veh/h	3401	3126	392	1781	1841	2745	1781	1870	1585	4944	1870	1560
Grp Volume(v), veh/h	516	238	244	66	427	930	100	462	149	630	299	292
Grp Sat Flow(s),veh/h/ln	1700	1749	1770	1781	1841	1373	1781	1870	1585	1648	1870	1560
Q Serve(g_s), s	13.5	11.6	11.7	0.0	20.7	14.6	3.6	21.7	3.9	11.4	11.3	8.2
Cycle Q Clear(g_c), s	13.5	11.6	11.7	0.0	20.7	14.6	3.6	21.7	3.9	11.4	11.3	8.2
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	548	318	322	495	440	1022	362	499	423	659	641	535
V/C Ratio(X)	0.94	0.75	0.76	0.13	0.97	0.91	0.28	0.93	0.35	0.96	0.47	0.55
Avail Cap(c_a), veh/h	548	589	596	495	440	1022	374	499	423	659	641	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	34.9	34.9	27.0	33.9	9.9	21.9	32.1	8.6	38.7	23.1	8.7
Incr Delay (d2), s/veh	24.8	3.5	3.6	0.1	35.3	11.8	0.4	25.6	2.3	24.6	2.4	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	5.2	5.3	1.1	13.3	5.2	1.5	13.0	2.7	6.0	5.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	38.4	38.5	27.1	69.3	21.7	22.3	57.7	10.9	63.3	25.6	12.7
LnGrp LOS	E	D	D	C	E	C	C	E	B	E	C	B
Approach Vol, veh/h		998			1423			711			1221	
Approach Delay, s/veh		50.7			36.2			42.9			42.0	
Approach LOS		D			D			D			D	

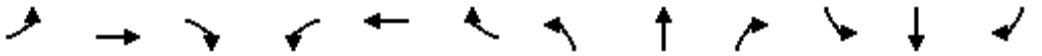
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	28.5	24.1	20.9	9.7	35.3	19.0	26.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.0	24.0	5.7	30.3	5.8	30.2	14.5	21.5
Max Q Clear Time (g_c+I1), s	13.4	23.7	2.0	13.7	5.6	13.3	15.5	22.7
Green Ext Time (p_c), s	0.0	0.1	0.0	2.6	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	563	16	20	1173	7	47	3	31	92	3	54
Future Volume (veh/h)	128	563	16	20	1173	7	47	3	31	92	3	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	670	19	21	1235	7	52	3	34	102	3	60
Peak Hour Factor	0.84	0.84	0.84	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	246	2120	969	459	2120	969	436	39	447	462	23	461
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	448	3469	1585	754	3469	1585	1339	130	1475	1371	76	1521
Grp Volume(v), veh/h	152	670	19	21	1235	7	52	0	37	102	0	63
Grp Sat Flow(s),veh/h/ln	448	1735	1585	754	1735	1585	1339	0	1605	1371	0	1597
Q Serve(g_s), s	32.6	9.8	0.5	1.4	22.6	0.2	3.1	0.0	1.7	6.0	0.0	3.0
Cycle Q Clear(g_c), s	55.1	9.8	0.5	11.2	22.6	0.2	6.1	0.0	1.7	7.8	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	1.00		0.95
Lane Grp Cap(c), veh/h	246	2120	969	459	2120	969	436	0	487	462	0	484
V/C Ratio(X)	0.62	0.32	0.02	0.05	0.58	0.01	0.12	0.00	0.08	0.22	0.00	0.13
Avail Cap(c_a), veh/h	303	2561	1170	555	2561	1170	436	0	487	462	0	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	9.8	8.0	12.5	12.3	8.0	28.8	0.0	26.1	28.9	0.0	26.5
Incr Delay (d2), s/veh	2.5	0.1	0.0	0.0	0.3	0.0	0.6	0.0	0.3	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.5	0.2	0.2	8.2	0.1	1.1	0.0	0.7	2.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	9.9	8.0	12.6	12.6	8.0	29.3	0.0	26.4	30.0	0.0	27.1
LnGrp LOS	C	A	A	B	B	A	C	A	C	C	A	C
Approach Vol, veh/h		841			1263			89			165	
Approach Delay, s/veh		13.8			12.6			28.1			28.9	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.3		68.7		36.3		68.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		77.5		18.5		77.5				
Max Q Clear Time (g_c+I1), s		8.1		57.1		9.8		24.6				
Green Ext Time (p_c), s		0.2		7.1		0.4		13.6				

Intersection Summary												
HCM 6th Ctrl Delay			14.7									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	559	53	161	471	766	32	266	222	1337	616	473
Future Volume (veh/h)	419	559	53	161	471	766	32	266	222	1337	616	473
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	451	601	57	164	481	782	34	280	234	1407	648	498
Peak Hour Factor	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	410	694	66	328	438	1666	168	277	235	1255	919	767
Arrive On Green	0.12	0.21	0.21	0.14	0.24	0.24	0.03	0.15	0.15	0.37	0.49	0.49
Sat Flow, veh/h	3401	3229	306	1781	1841	2745	1781	1870	1585	3401	1870	1560
Grp Volume(v), veh/h	451	325	333	164	481	782	34	280	234	1407	648	498
Grp Sat Flow(s),veh/h/ln	1700	1749	1786	1781	1841	1373	1781	1870	1585	1700	1870	1560
Q Serve(g_s), s	17.5	26.0	26.1	6.1	34.5	10.4	2.3	21.5	16.2	53.5	39.1	22.1
Cycle Q Clear(g_c), s	17.5	26.0	26.1	6.1	34.5	10.4	2.3	21.5	16.2	53.5	39.1	22.1
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	410	376	384	328	438	1666	168	277	235	1255	919	767
V/C Ratio(X)	1.10	0.87	0.87	0.50	1.10	0.47	0.20	1.01	1.00	1.12	0.70	0.65
Avail Cap(c_a), veh/h	410	469	479	328	438	1666	185	277	235	1255	919	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	54.9	54.9	54.1	55.3	5.6	50.4	61.7	35.5	45.8	28.7	11.3
Incr Delay (d2), s/veh	73.8	13.1	13.2	1.2	72.3	0.2	0.6	56.5	57.6	65.6	4.5	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	12.8	13.2	5.5	24.8	2.4	1.1	14.6	10.1	33.8	18.6	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	137.6	68.0	68.1	55.3	127.6	5.8	51.0	118.3	93.1	111.4	33.2	15.5
LnGrp LOS	F	E	E	E	F	A	D	F	F	F	C	B
Approach Vol, veh/h		1109			1427			548			2553	
Approach Delay, s/veh		96.3			52.5			103.3			72.8	
Approach LOS		F			D			F			E	

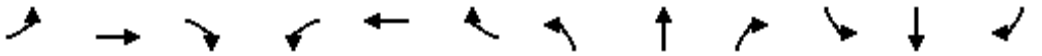
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	58.0	26.0	25.4	35.6	8.2	75.8	22.0	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	53.5	21.5	13.1	38.9	5.1	69.9	17.5	34.5
Max Q Clear Time (g_c+I1), s	55.5	23.5	8.1	28.1	4.3	41.1	19.5	36.5
Green Ext Time (p_c), s	0.0	0.0	0.2	3.1	0.0	7.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.3
HCM 6th LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1388	179	126	1251	207	125
Future Volume (veh/h)	1388	179	126	1251	207	125
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1826	1870	1870
Adj Flow Rate, veh/h	1431	185	137	1360	218	132
Peak Hour Factor	0.97	0.97	0.92	0.92	0.95	0.95
Percent Heavy Veh, %	5	5	2	5	2	2
Cap, veh/h	2240	287	221	2512	336	299
Arrive On Green	0.72	0.72	0.72	0.72	0.19	0.19
Sat Flow, veh/h	3184	396	313	3561	1781	1585
Grp Volume(v), veh/h	796	820	137	1360	218	132
Grp Sat Flow(s),veh/h/ln	1735	1755	313	1735	1781	1585
Q Serve(g_s), s	24.2	25.0	41.7	18.4	11.7	7.6
Cycle Q Clear(g_c), s	24.2	25.0	66.6	18.4	11.7	7.6
Prop In Lane		0.23	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1256	1270	221	2512	336	299
V/C Ratio(X)	0.63	0.65	0.62	0.54	0.65	0.44
Avail Cap(c_a), veh/h	1285	1299	226	2569	336	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	7.4	24.6	6.5	38.7	37.1
Incr Delay (d2), s/veh	1.0	1.1	5.0	0.2	9.3	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	8.1	3.2	5.7	5.9	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.3	8.5	29.6	6.7	48.0	41.7
LnGrp LOS	A	A	C	A	D	D
Approach Vol, veh/h	1616			1497	350	
Approach Delay, s/veh	8.4			8.8	45.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	24.0	79.3	79.3
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	76.5	76.5
Max Q Clear Time (g_c+I1), s	13.7	27.0	68.6
Green Ext Time (p_c), s	0.6	19.5	6.2

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1439	266	87	955	16	131	11	92	49	13	67
Future Volume (veh/h)	52	1439	266	87	955	16	131	11	92	49	13	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	1499	277	94	1027	17	158	13	111	57	15	78
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.83	0.83	0.83	0.86	0.86	0.86
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	342	1855	847	217	1886	862	369	499	423	411	70	363
Arrive On Green	0.04	0.53	0.53	0.05	0.54	0.54	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3469	1585	1781	3469	1585	1303	1870	1585	1267	262	1363
Grp Volume(v), veh/h	54	1499	277	94	1027	17	158	13	111	57	0	93
Grp Sat Flow(s),veh/h/ln	1781	1735	1585	1781	1735	1585	1303	1870	1585	1267	0	1625
Q Serve(g_s), s	1.2	32.1	8.9	2.1	17.4	0.4	9.7	0.5	5.0	3.2	0.0	4.0
Cycle Q Clear(g_c), s	1.2	32.1	8.9	2.1	17.4	0.4	13.8	0.5	5.0	3.6	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.84
Lane Grp Cap(c), veh/h	342	1855	847	217	1886	862	369	499	423	411	0	433
V/C Ratio(X)	0.16	0.81	0.33	0.43	0.54	0.02	0.43	0.03	0.26	0.14	0.00	0.21
Avail Cap(c_a), veh/h	369	2236	1022	300	2378	1086	369	499	423	411	0	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	17.3	11.9	17.0	13.4	9.6	31.2	24.6	26.2	25.9	0.0	25.9
Incr Delay (d2), s/veh	0.2	1.9	0.2	1.4	0.2	0.0	3.6	0.1	1.5	0.7	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	12.2	3.0	1.0	6.4	0.2	3.4	0.2	2.0	1.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	19.2	12.1	18.4	13.7	9.6	34.8	24.7	27.7	26.6	0.0	27.0
LnGrp LOS	B	B	B	B	B	A	C	C	C	C	A	C
Approach Vol, veh/h		1830			1138			282			150	
Approach Delay, s/veh		17.9			14.0			31.6			26.9	
Approach LOS		B			B			C			C	

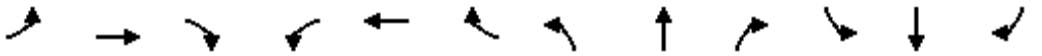
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.7	9.0	53.0		28.7	8.2	53.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		24.2	8.8	58.5		24.2	5.1	62.2				
Max Q Clear Time (g_c+I1), s		15.8	4.1	34.1		6.0	3.2	19.4				
Green Ext Time (p_c), s		0.6	0.1	14.4		0.6	0.0	9.7				

Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Intersection	
Intersection Delay, s/veh	133.7
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1746	1096	81	152
Demand Flow Rate, veh/h	1822	1150	83	155
Vehicles Circulating, veh/h	139	316	1856	1168
Vehicles Exiting, veh/h	1184	1623	105	298
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	191.2	66.9	31.1	10.1
Approach LOS	F	F	D	B

Lane	Left	Right	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT	R	LT	R	LTR	LT	R
RT Channelized							
Lane Util	0.963	0.037	0.989	0.011	1.000	0.690	0.310
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.976	4.544	4.544
Entry Flow, veh/h	1754	68	1137	13	83	107	48
Cap Entry Lane, veh/h	1251	1251	1065	1065	208	491	491
Entry HV Adj Factor	0.957	0.985	0.953	1.000	0.974	0.980	0.979
Flow Entry, veh/h	1679	67	1083	13	81	105	47
Cap Entry, veh/h	1198	1233	1015	1065	203	481	480
V/C Ratio	1.402	0.054	1.067	0.012	0.399	0.218	0.098
Control Delay, s/veh	198.7	3.4	67.7	3.5	31.1	10.7	8.8
LOS	F	A	F	A	D	B	A
95th %tile Queue, veh	69	0	25	0	2	1	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	501	907	95	29	518	86	92	154	43	293	289	367
Future Volume (veh/h)	501	907	95	29	518	86	92	154	43	293	289	367
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1870	1870	1826	1856	1870	1870	1870	1870	1870	1841
Adj Flow Rate, veh/h	506	916	96	31	557	92	105	175	49	315	311	0
Peak Hour Factor	0.99	0.99	0.99	0.93	0.93	0.93	0.88	0.88	0.88	0.93	0.93	0.93
Percent Heavy Veh, %	4	5	2	2	5	3	2	2	2	2	2	4
Cap, veh/h	458	1061	921	157	610	526	254	233	65	346	447	
Arrive On Green	0.20	0.58	0.58	0.33	0.33	0.33	0.05	0.17	0.17	0.13	0.24	0.00
Sat Flow, veh/h	1753	1826	1585	557	1826	1572	1781	1406	394	1781	1870	1560
Grp Volume(v), veh/h	506	916	96	31	557	92	105	0	224	315	311	0
Grp Sat Flow(s),veh/h/ln	1753	1826	1585	557	1826	1572	1781	0	1800	1781	1870	1560
Q Serve(g_s), s	21.5	44.5	2.8	5.2	30.8	4.4	5.2	0.0	12.5	13.2	16.0	0.0
Cycle Q Clear(g_c), s	21.5	44.5	2.8	23.7	30.8	4.4	5.2	0.0	12.5	13.2	16.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	458	1061	921	157	610	526	254	0	299	346	447	
V/C Ratio(X)	1.10	0.86	0.10	0.20	0.91	0.18	0.41	0.00	0.75	0.91	0.70	
Avail Cap(c_a), veh/h	458	1139	989	181	689	593	254	0	299	346	447	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.2	18.6	9.9	39.5	33.6	24.8	34.6	0.0	41.9	33.8	36.6	0.0
Incr Delay (d2), s/veh	73.6	6.7	0.0	0.6	15.4	0.2	1.1	0.0	15.9	27.1	8.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.0	19.2	1.0	0.7	15.9	1.6	2.3	0.0	6.8	4.4	8.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.8	25.3	9.9	40.1	49.1	25.0	35.7	0.0	57.8	60.9	45.3	0.0
LnGrp LOS	F	C	A	D	D	C	D	A	E	E	D	
Approach Vol, veh/h		1518			680			329			626	A
Approach Delay, s/veh		50.2			45.4			50.7			53.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	22.0		65.8	10.0	29.7	26.0	39.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.2	17.5		65.8	5.5	25.2	21.5	39.8				
Max Q Clear Time (g_c+I1), s	15.2	14.5		46.5	7.2	18.0	23.5	32.8				
Green Ext Time (p_c), s	0.0	0.3		7.6	0.0	1.0	0.0	2.4				

Intersection Summary			
HCM 6th Ctrl Delay		49.8	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1155	67	3	564	29	17
Future Vol, veh/h	1155	67	3	564	29	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	97	97	69	69
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	1313	76	3	581	42	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1389	0	1938	1351
Stage 1	-	-	-	-	1351	-
Stage 2	-	-	-	-	587	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	493	-	72	184
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	556	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	493	-	72	184
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	556	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	108.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	93	-	-	493	-
HCM Lane V/C Ratio	0.717	-	-	0.006	-
HCM Control Delay (s)	108.6	-	-	12.3	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	3.6	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	925	666	0	0	47
Future Vol, veh/h	0	925	666	0	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	98	73	73	92	32
Heavy Vehicles, %	2	5	5	2	2	20
Mvmt Flow	0	944	912	0	0	147

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	912
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.48
Pot Cap-1 Maneuver	0	-	-	0	0	308
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	308
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.9
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	308
HCM Lane V/C Ratio	-	-	0.477
HCM Control Delay (s)	-	-	26.9
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	2.4

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	910	67	17	496	9	30	3	19	7	2	20
Future Vol, veh/h	14	910	67	17	496	9	30	3	19	7	2	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	120	150	-	300	-	-	-	-	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	91	91	91	80	80	80	60	60	60
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	15	948	70	19	545	10	38	4	24	12	3	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	555	0	0	1018	0	0	1584	1571	948	1610	1631	545
Stage 1	-	-	-	-	-	-	978	978	-	583	583	-
Stage 2	-	-	-	-	-	-	606	593	-	1027	1048	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1015	-	-	682	-	-	88	110	316	84	101	538
Stage 1	-	-	-	-	-	-	301	329	-	498	499	-
Stage 2	-	-	-	-	-	-	484	493	-	283	305	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1015	-	-	682	-	-	78	105	316	73	97	538
Mov Cap-2 Maneuver	-	-	-	-	-	-	78	105	-	73	97	-
Stage 1	-	-	-	-	-	-	296	324	-	491	485	-
Stage 2	-	-	-	-	-	-	438	479	-	255	300	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	76.7	27.8
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	110	1015	-	-	682	-	-	77	538
HCM Lane V/C Ratio	0.591	0.014	-	-	0.027	-	-	0.195	0.062
HCM Control Delay (s)	76.7	8.6	-	-	10.4	-	-	62.7	12.1
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	2.9	0	-	-	0.1	-	-	0.7	0.2

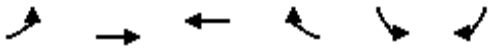
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	913	455	33	36	67
Future Vol, veh/h	23	913	455	33	36	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	230	-	-	300	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	91	91	70	70
Heavy Vehicles, %	20	5	5	20	20	20
Mvmt Flow	24	951	500	36	51	96

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	500	0	-	0	1499	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	999	-
Critical Hdwy	4.3	-	-	-	6.6	6.4
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.38	-	-	-	3.68	3.48
Pot Cap-1 Maneuver	978	-	-	0	122	536
Stage 1	-	-	-	0	574	-
Stage 2	-	-	-	0	330	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	978	-	-	-	119	536
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	330	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	28.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	978	-	-	119	536
HCM Lane V/C Ratio	0.024	-	-	0.432	0.179
HCM Control Delay (s)	8.8	-	-	56.5	13.2
HCM Lane LOS	A	-	-	F	B
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.6



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	84	856	505	42	135	198
Future Volume (veh/h)	84	856	505	42	135	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1604	1826	1826	1604	1604	1604
Adj Flow Rate, veh/h	88	892	555	0	321	471
Peak Hour Factor	0.96	0.96	0.91	0.91	0.42	0.42
Percent Heavy Veh, %	20	5	5	20	20	20
Cap, veh/h	297	984	806		555	494
Arrive On Green	0.05	0.54	0.44	0.00	0.36	0.36
Sat Flow, veh/h	1527	1826	1826	1359	1527	1359
Grp Volume(v), veh/h	88	892	555	0	321	471
Grp Sat Flow(s),veh/h/ln	1527	1826	1826	1359	1527	1359
Q Serve(g_s), s	2.8	40.6	22.5	0.0	15.6	31.1
Cycle Q Clear(g_c), s	2.8	40.6	22.5	0.0	15.6	31.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	297	984	806		555	494
V/C Ratio(X)	0.30	0.91	0.69		0.58	0.95
Avail Cap(c_a), veh/h	335	1239	1015		555	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	19.2	20.7	0.0	23.6	28.6
Incr Delay (d2), s/veh	0.6	8.3	1.4	0.0	4.3	30.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	17.9	9.4	0.0	6.1	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.9	27.5	22.1	0.0	28.0	58.9
LnGrp LOS	B	C	C		C	E
Approach Vol, veh/h		980	555	A	792	
Approach Delay, s/veh		26.5	22.1		46.4	
Approach LOS		C	C		D	

Timer - Assigned Phs		4		6	7	8
Phs Duration (G+Y+Rc), s		54.1		38.0	9.0	45.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		62.5		33.5	6.8	51.2
Max Q Clear Time (g_c+I1), s		42.6		33.1	4.8	24.5
Green Ext Time (p_c), s		7.0		0.2	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1660	1034	12	0	23
Future Vol, veh/h	0	1660	1034	12	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	95	94	94	92	75
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	0	1747	1100	13	0	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	550
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	479
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	479
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	479
HCM Lane V/C Ratio	-	-	-	0.064
HCM Control Delay (s)	-	-	-	13
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1482	886	67	0	84
Future Vol, veh/h	0	1482	886	67	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	95	94	94	92	85
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	0	1560	943	71	0	99

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	472
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	538
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	538
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	538
HCM Lane V/C Ratio	-	-	-	0.184
HCM Control Delay (s)	-	-	-	13.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.7

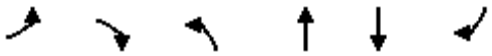
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	91	0	750	841	72
Future Vol, veh/h	0	91	0	750	841	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	85	92	88	93	93
Heavy Vehicles, %	2	2	2	3	3	2
Mvmt Flow	0	107	0	852	904	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	904	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	335	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	335	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	335	-	-
HCM Lane V/C Ratio	-	0.32	-	-
HCM Control Delay (s)	-	20.7	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	1.3	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	316	133	577	531	97
Future Volume (veh/h)	88	316	133	577	531	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	105	376	148	641	559	102
Peak Hour Factor	0.84	0.84	0.90	0.90	0.95	0.95
Percent Heavy Veh, %	2	2	2	4	4	4
Cap, veh/h	503	448	362	1038	854	156
Arrive On Green	0.28	0.28	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1781	1585	774	1841	1515	276
Grp Volume(v), veh/h	105	376	148	641	0	661
Grp Sat Flow(s),veh/h/ln	1781	1585	774	1841	0	1791
Q Serve(g_s), s	2.6	13.1	9.6	13.7	0.0	15.0
Cycle Q Clear(g_c), s	2.6	13.1	24.6	13.7	0.0	15.0
Prop In Lane	1.00	1.00	1.00			0.15
Lane Grp Cap(c), veh/h	503	448	362	1038	0	1010
V/C Ratio(X)	0.21	0.84	0.41	0.62	0.00	0.65
Avail Cap(c_a), veh/h	925	824	789	2054	0	1998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.1	19.8	17.3	8.6	0.0	8.8
Incr Delay (d2), s/veh	0.2	4.3	0.7	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.9	1.6	4.3	0.0	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.3	24.1	18.1	9.2	0.0	9.6
LnGrp LOS	B	C	B	A	A	A
Approach Vol, veh/h	481			789	661	
Approach Delay, s/veh	22.4			10.8	9.6	
Approach LOS	C			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		37.6		21.1		37.6
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		65.5		30.5		65.5
Max Q Clear Time (g_c+I1), s		26.6		15.1		17.0
Green Ext Time (p_c), s		6.6		1.5		5.6

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	559	53	161	471	766	32	266	222	1337	616	473
Future Volume (veh/h)	419	559	53	161	471	766	32	266	222	1337	616	473
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1841	1841	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	451	601	57	164	481	782	34	280	234	1407	648	498
Peak Hour Factor	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	4	4	2	2	2	4	2	4
Cap, veh/h	468	708	67	400	483	1510	167	304	258	1421	789	658
Arrive On Green	0.14	0.22	0.22	0.18	0.26	0.26	0.03	0.16	0.16	0.29	0.42	0.42
Sat Flow, veh/h	3401	3229	306	1781	1841	2745	1781	1870	1585	4944	1870	1560
Grp Volume(v), veh/h	451	325	333	164	481	782	34	280	234	1407	648	498
Grp Sat Flow(s),veh/h/ln	1700	1749	1786	1781	1841	1373	1781	1870	1585	1648	1870	1560
Q Serve(g_s), s	15.8	21.4	21.5	4.1	31.3	9.6	1.9	17.7	12.1	34.0	36.8	20.6
Cycle Q Clear(g_c), s	15.8	21.4	21.5	4.1	31.3	9.6	1.9	17.7	12.1	34.0	36.8	20.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	468	384	392	400	483	1510	167	304	258	1421	789	658
V/C Ratio(X)	0.96	0.85	0.85	0.41	1.00	0.52	0.20	0.92	0.91	0.99	0.82	0.76
Avail Cap(c_a), veh/h	468	482	493	400	483	1510	191	304	258	1421	789	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	44.9	44.9	40.8	44.2	5.9	40.2	49.5	23.8	42.6	30.7	11.8
Incr Delay (d2), s/veh	32.5	11.0	11.0	0.7	39.7	0.3	0.6	34.9	36.7	21.4	9.4	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	10.4	10.7	4.2	19.5	2.1	0.9	11.2	7.2	16.5	18.3	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.0	55.9	56.0	41.5	83.9	6.2	40.8	84.4	60.5	64.0	40.1	19.7
LnGrp LOS	F	E	E	D	F	A	D	F	E	E	D	B
Approach Vol, veh/h		1109			1427			548			2553	
Approach Delay, s/veh		67.3			36.5			71.5			49.3	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.0	24.0	26.2	30.8	7.9	55.1	21.0	36.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	34.5	19.5	14.9	33.1	5.0	49.0	16.5	31.5
Max Q Clear Time (g_c+I1), s	36.0	19.7	6.1	23.5	3.9	38.8	17.8	33.3
Green Ext Time (p_c), s	0.0	0.0	0.3	2.9	0.0	4.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	1335	64	29	989	12	20	4	30	85	4	40
Future Volume (veh/h)	260	1335	64	29	989	12	20	4	30	85	4	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	1405	67	31	1052	13	30	6	45	100	5	47
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.67	0.67	0.67	0.85	0.85	0.85
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	373	2443	1116	249	2443	1116	317	40	299	318	33	306
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	530	3469	1585	359	3469	1585	1352	190	1424	1354	155	1454
Grp Volume(v), veh/h	274	1405	67	31	1052	13	30	0	51	100	0	52
Grp Sat Flow(s),veh/h/ln	530	1735	1585	359	1735	1585	1352	0	1614	1354	0	1609
Q Serve(g_s), s	47.8	21.2	1.4	4.9	13.5	0.3	1.9	0.0	2.7	6.8	0.0	2.8
Cycle Q Clear(g_c), s	61.3	21.2	1.4	26.1	13.5	0.3	4.7	0.0	2.7	9.5	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.90
Lane Grp Cap(c), veh/h	373	2443	1116	249	2443	1116	317	0	339	318	0	338
V/C Ratio(X)	0.73	0.58	0.06	0.12	0.43	0.01	0.09	0.00	0.15	0.31	0.00	0.15
Avail Cap(c_a), veh/h	391	2561	1170	261	2561	1170	317	0	339	318	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	7.7	4.8	14.2	6.6	4.6	35.8	0.0	33.8	37.7	0.0	33.8
Incr Delay (d2), s/veh	6.7	0.3	0.0	0.2	0.1	0.0	0.6	0.0	0.9	2.6	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.9	0.4	0.4	4.4	0.1	0.7	0.0	1.1	2.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	8.0	4.8	14.4	6.7	4.6	36.4	0.0	34.8	40.3	0.0	34.8
LnGrp LOS	C	A	A	B	A	A	D	A	C	D	A	C
Approach Vol, veh/h		1746			1096			81			152	
Approach Delay, s/veh		10.8			6.9			35.3			38.4	
Approach LOS		B			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.6		78.4		26.6		78.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		77.5		18.5		77.5				
Max Q Clear Time (g_c+I1), s		6.7		63.3		11.5		28.1				
Green Ext Time (p_c), s		0.2		10.6		0.3		11.3				

Intersection Summary												
HCM 6th Ctrl Delay			11.4									
HCM 6th LOS			B									

Appendix F

Intersection Control Evaluation for GA 124 Site Accesses

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING

Memorandum

Date: May 8, 2020

From: Marc R. Acampora, PE

Subject: Intersection Control Evaluation for GA 124 at Site Accesses to Proposed Braselton Spout Springs Mixed-Use Development, Gwinnett County, Georgia

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An Intersection Control Evaluation (ICE) was performed for the three site accesses on GA 124 to a proposed mixed-use development in Gwinnett County, Georgia. The location of the development is shown in Figure 1. Figure 2 is an aerial photograph along the existing adjacent section of GA 124. Figure 3 is a site plan showing the three proposed accesses that are the subject of this study and Figures 4, 5, and 6 are photographs of the existing conditions.

Figure 1 – Site Location Map

858 Myrtle Street, NE
Atlanta, Georgia 30308
phone (678) 637-1763
e-mail acamporatraffic@comcast.net
www.acamporatraffic.com

Figure 2 – Aerial Photograph of GA 124 Adjacent to Site

Figure 3 – Photograph of GA 124 Facing West, West of Huntington Hill Trace

Figure 4 – Photograph of GA 124 Facing East at Huntington Hill Trace

Figure 5 – Photograph of GA 124 Facing East, East of Huntington Hill Trace

Existing Conditions

Braselton Highway (Georgia State Route 124) is an urban minor arterial with a general east/west orientation in the vicinity of the study intersections. There is one through travel lane per direction in this vicinity, with an eastbound exclusive right turn lane at Huntington Hill Trace. Development along the adjacent segment of GA 124 includes low-density single family residential, undeveloped land, small spot retail such as gasoline stations, and, a short distance to the east, three large County schools including a high school, middle school, and elementary school, all with access along the north side of GA 124. The terrain along the adjacent segment of GA 124 is very gently rolling and the posted speed limit is 45 mph, dropping to 35 mph in the school zone to the east and dropping to 35 mph west of Jim Moore Road. In 2018 the Georgia Department of Transportation (Georgia DOT) recorded an Annual Average Daily Traffic (AADT) volume of 17,300 vehicles per day (vpd) on GA 124 east of Spout Springs Road.

Huntington Hill Trace is a local subdivision street with a posted speed limit of 25 mph.

Gwinnett County operates a public transit system, Gwinnett County Transit, but there is no regularly scheduled mass transit service adjacent to the subject site. There is no sidewalk along GA 124 adjacent to the site. There are segments of sidewalk in the area and there are crosswalks and pedestrian signals at the signalized intersection of GA 124 at Spout Springs Road / Mineral Springs Road.

Programmed Widening of GA 124

GW-422, the widening of GA 124 from two to four lanes adjacent to the proposed site, was identified by Gwinnett DOT as entering the ROW acquisition phase and completion is anticipated before 2025 buildout of the subject mixed-use development. The plans for this widening include the construction of a roundabout at the intersection of GA 124 at Huntington Hill Trace.

Proposed Mixed-Use Development

This ICE includes the three GA 124 accesses to a proposed mixed-use development, which will include a proposed full-movement access that will align with Huntington Hill Trace (the location of a proposed roundabout according to the previously-identified GW-422 widening project), as well as two proposed right-in/right-out (RIRO) accesses, one on either side of Huntington Hill Trace. There will be an additional RIRO access on Spout Springs Road, which is not evaluated in this ICE because that cross street is not a state route. The mixed-use development will consist of 524 residential units including 121 detached single family homes, 40 townhomes, and 363 multi-family units; seven (7) commercial outparcels including a 5,600 ft² restaurant, a 3,000 ft² restaurant with drive-through, another 3,000 ft² restaurant with drive-through, 15,000 ft² of office/retail/restaurant, 17,200 ft² of office/retail, 12,600 ft² of office/retail, and 14,400 ft² of office/retail/restaurant, for a total of 71,600 ft² of commercial uses. The site will be developed in one continuous phase, with a tentative five-year build-out (2025), which will be influenced by market conditions. A traffic impact study for the proposed development was prepared in April 2020, concurrently with this ICE. The results of that study will not be reproduced here and the reader is referred to that study for detailed findings and recommendations. The site plan for that development is presented in Figure 6 and a summary of the trip generation is presented in Table 1.

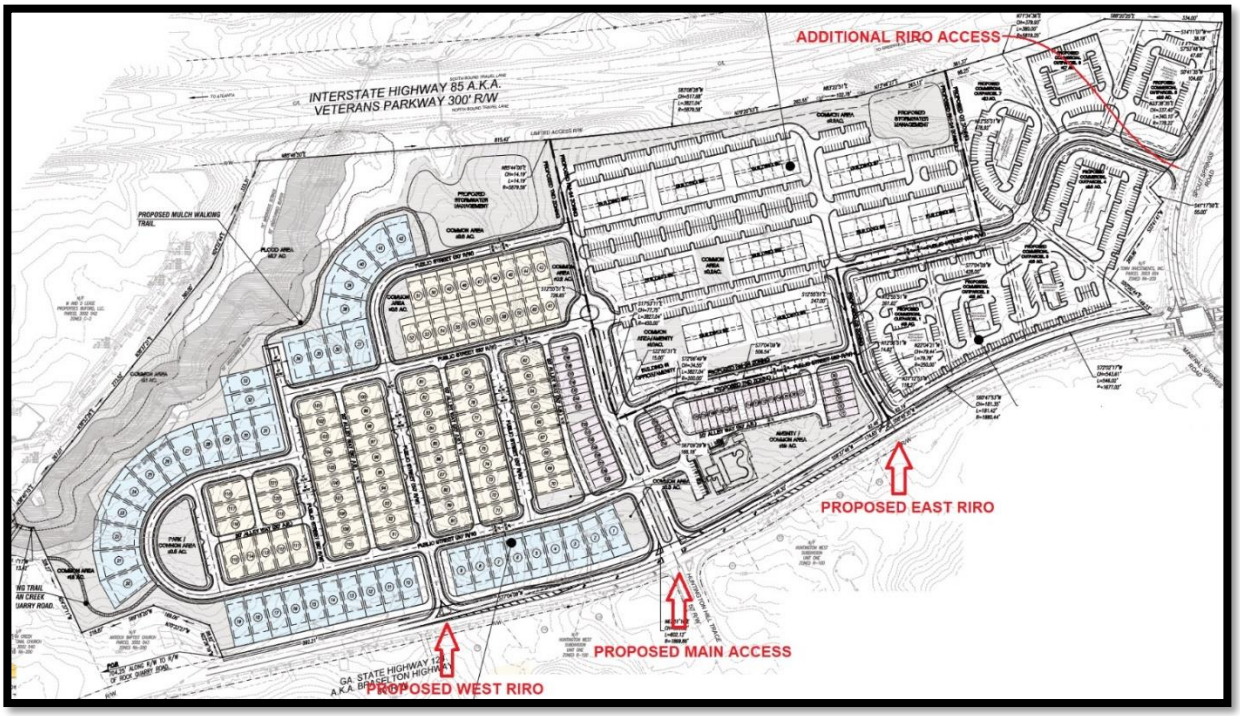


Figure 6 – Proposed Development Site Plan Showing Three ICE Intersections

Table 1 – Proposed Development Trip Generation Summary

Land Use	Size	AM Peak Hour			PM Peak Hour			24-Hour
		Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way
Residential New Trips	524 units	59	173	232	186	115	301	3,480
Commercial Gross Trips	71,600 ft²	187	167	354	243	234	477	5,692
-pass-by trips		-76	-71	-148	-97	-91	-187	-2,018
Commercial New Trips		111	96	206	146	143	290	3,674
Total New Trips		170	269	438	332	258	591	7,154

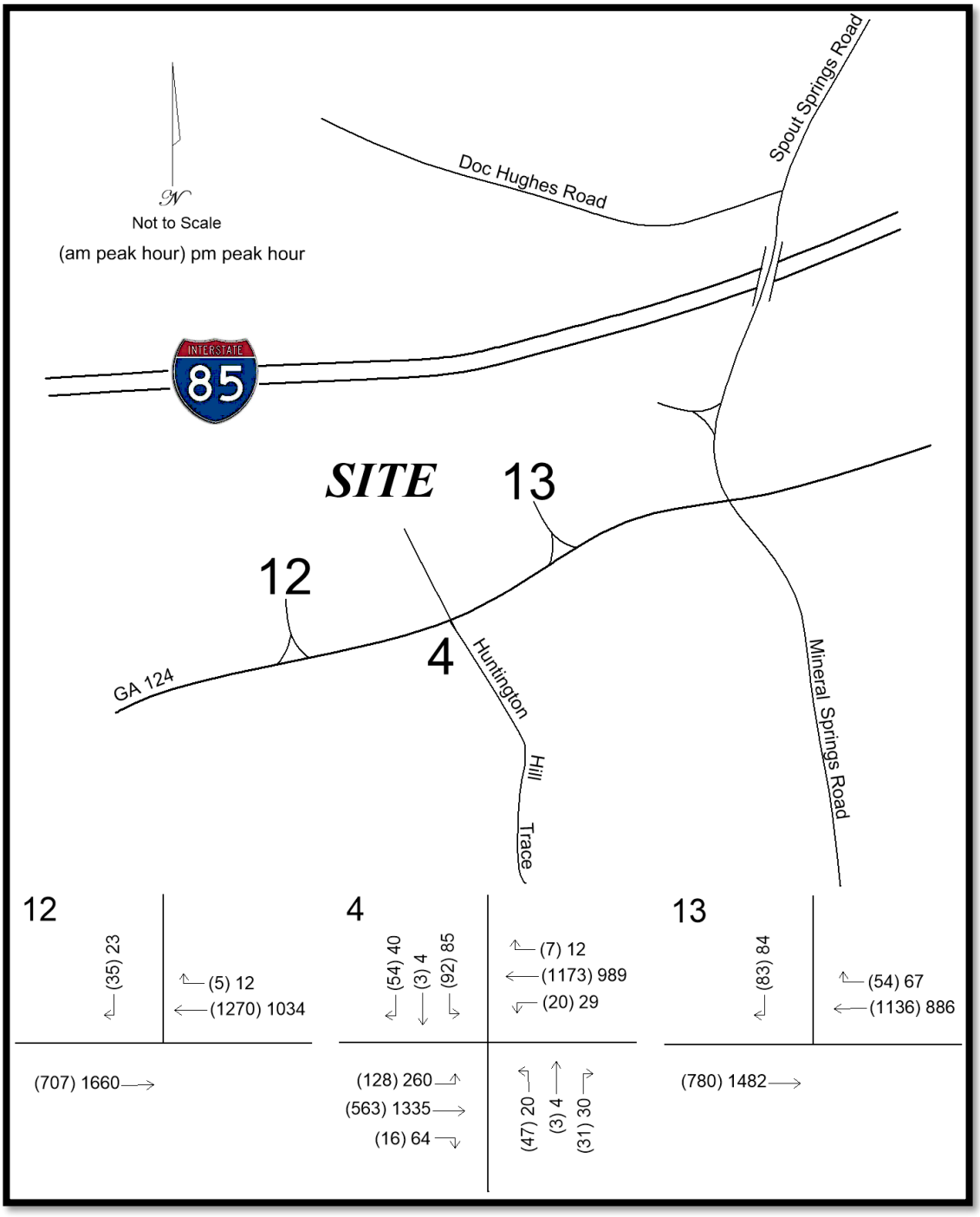
Existing Traffic Volumes

The preparation of the traffic impact study and this ICE coincided with the onset of quarantining and statewide school closures due to the COVID-19 pandemic. GA 124, and roads throughout the state, saw dramatic decreases in volumes. Therefore, existing traffic volume counts could not be collected. Previously-collected turning movement counts were obtained from Gwinnett County at the GA 124 / Huntington Hill Trace intersection and other nearby intersections. This data was adjusted, as appropriate, to develop a 2020 "existing" condition. The intersection raw count data is attached to this memorandum.

In addition to the intersection turning movement count, Georgia DOT AADT count data was obtained at nearby count station 135-0209, on GA 124 just east of Spout Springs Road. The 2018 AADT is 17,300 vpd.

Future Traffic Volumes

Historic Georgia DOT AADT count data at station 135-0209 and other nearby count stations were used to develop traffic volume growth projections. This data is documented in the traffic impact study for the mixed-use development. It is projected that volumes will increase at a rate of approximately 2% per year. The trips from the proposed mixed-use development were added to the 2020 "existing" volumes, which were increased by the 2% annual growth rate, to develop future volumes at the three site accesses that are the subject of this ICE. Figure 8 presents the 2025 site access volumes developed in the traffic impact study. The ICE spreadsheets, attached to this memorandum, calculate the 2045 intersection volumes that were also used in the ICE analysis.



intersection numbering corresponds to traffic impact study numbering scheme for cross-reference convenience

Figure 8 – 2025 Volumes at Subject Site Accesses

Intersection Control Evaluation

An Intersection Control Evaluation was prepared for the three proposed site accesses on GA 124. The analysis used Georgia DOT ICE Tool v2.15, revised July 1, 2019, which was confirmed to be the latest version at the time of this study. The Introduction Sheet, Stage 1: Screening Decision Records, Stage 2: Alternative Selection Decision Records, and Waiver Requests, are attached to this report. The results are summarized as follows:

Stage 1: Screening Decision Records

West Access

This intersection is proposed to be restricted to right-in/right-out (RIRO) on a multi-lane highway (after the proposed widening from two to four lanes). The general cross section of GA 124 after the widening does not include a median, but a median is proposed adjacent to this access due to the proposed roundabout. The operational analysis shows acceptable operations as a RIRO. Therefore, an ICE Waiver is being requested for this access.

Central Access at Huntington Hill Trace

The options selected in Stage 1 for further analysis at the central site access / Huntington Hill Trace are:

1. Conventional Minor Street Stop Sign
2. Multilane Roundabout (proposed by Gwinnett DOT)
3. Traffic Signal

East Access

This intersection is proposed to be restricted to right-in/right-out (RIRO) on a multi-lane highway (after the proposed widening from two to four lanes). The general cross section of GA 124 after the widening does not include a median, but a median is proposed adjacent to this access due to the proposed roundabout. The operational analysis shows acceptable operations as a RIRO. Therefore, an ICE Waiver is being requested for this access.

Stage 2: Alternative Selection Decision Record – Central Access at Huntington Hill Trace

The Stage 2 analysis was performed with the input assumption that a traffic signal would be warranted (the analysis will not rank the signal option if it is input that a signal is not warranted). However, no signal warrant analysis was performed at the time this ICE was performed.

The Stage 2 Analysis ranks the traffic signal as #1 with a score of 3.5. The roundabout is ranked #2 with a score of -1.3. The minor street stop sign control is ranked #3 with a score of -6.8. Therefore, signalization is the preferred option if a signal is warranted.

Conclusions

This ICE requests waivers at the east and west accesses and recommends that right-in/right-out control be provided at these two accesses. Based on the findings of this ICE, it is concluded that signalization is the preferred method of control at the central access / Huntington Hill Trace, if a signal is warranted. It is recommended that a signal warrant analysis be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (MUTCD).

GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL

ICE Version 2.15 | Revised 07/01/2019

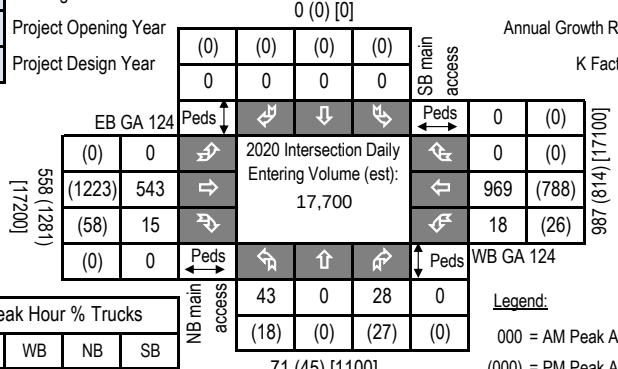
GDOT PI # (or N/A):	N/A	Request By:	MFT, LLC
County:	Gwinnett	GDOT District:	1 - Gainesville
Major (State) Road:	GA 124	Speed Limit:	45 mph
Minor (Crossing) ST:	main access	Speed Limit:	< 35 mph
Major ST Direction:	East/West	Area Type:	Suburb/Transition
Intersection Control:	Conventional (Minor Stop)		
Prepared By:	MRA	Analyst:	MRA
Date:	4/29/2020	Project ID:	GW-422
Project Purpose:	request a driveway permit for a new access to a proposed mixed-use development		

2020	Existing Data Year
2025	Project Opening Year
2045	Project Design Year

Annual Growth Rate: 2.0%

K Factor*: 12%

2020 Existing Year Volumes



Peak Hour % Trucks			
EB	WB	NB	SB
5%	5%	2%	0%

Legend:

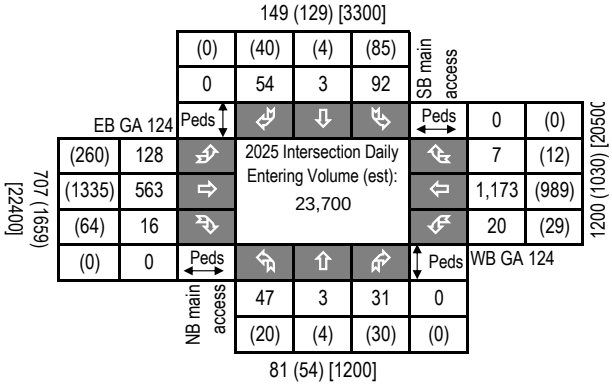
000 = AM Peak Approach Vol

(000) = PM Peak Approach Vol

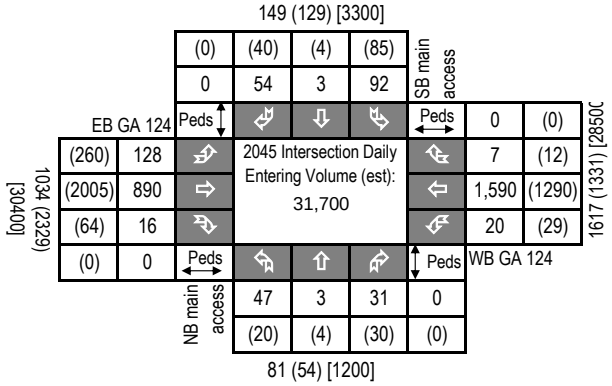
[000] = ADT Volume (Estimate)

Approach Splits: GA 124 - 0.96 / main access - 0.04

2025 Opening Year Volumes



2045 Design Year Volumes



Introduction: In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

Tool Goal: The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

Requirements: An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "**Waiver**" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

Two-Stage Process: A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

Stage 1: Screening Decision Record Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

Stage 2: Alternative Selection Decision Record Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

Documentation: A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI #	N/A
Project Location:	GA 124 @ main access
Existing Control:	Conventional (Minor Stop)
Prepared by:	MRA
Date:	4/29/2020

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	**Screening Decision Justification:**
Unsignalized Intersections	Conventional (Minor Stop)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	alternative for further evaluation
	Conventional (All-Way Stop)	**Yes**	**Yes**	**Yes**	No	No	**Yes**	No	adding stop sign control on GA 124 not feasible
	Mini Roundabout	No	No	**Yes**	No	No	No	No	mini roundabout on GA 124 not feasible after widening to 4 lanes
	Single Lane Roundabout	**Yes**	**Yes**	**Yes**	**Yes**	No	No	No	single lane roundabout inconsistent with programmed widening to 4 lanes
	Multilane Roundabout	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	alternative for further evaluation
	RCUT (stop control)	**Yes**	**Yes**	**Yes**	**Yes**	No	No	No	no median precludes RCUT
	RIRO w/down stream U-Turn	**Yes**	**Yes**	**Yes**	**Yes**	No	No	No	no reasonale downstream opportunity for U-Turn, no median
	High-T (unsignalized)	No	No	No	No	No	No	No	not consistent with context
	Offset-T Intersections	No	No	No	No	No	No	No	not consistent with context
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	scale is inconsistent with context
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	scale is inconsistent with context
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	none
	Other unsignalized (provide description):	No	No	No	No	No	No	No	none
Signalized Intersections	Traffic Signal	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	alternative for further evaluation
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	no median precludes median U-Turn
	RCUT (signalized)	No	No	No	No	No	No	No	no median precludes RCUT
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	not consistent with context
	Continuous Green-T	No	No	No	No	No	No	No	not consistent with context
	Jughandle	No	No	No	No	No	No	No	not consistent with context
	Quadrant Roadway	No	No	No	No	No	No	No	not consistent with context
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	scale is inconsistent with context
	Diverging Diamond	No	No	No	No	No	No	No	scale is inconsistent with context
	Single Point Interchange	No	No	No	No	No	No	No	scale is inconsistent with context
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	none
	Other Signalized (provide description):	No	No	No	No	No	No	No	none

▭ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A): N/A
County: Gwinnett
Project Location: GA 124 @ main access
Existing Intersection Control: Conventional (Minor Stop)

GDOT District: 1 - Gainesville
Area Type: Suburb/Transition

Date: 4/29/2020
Agency/Firm: MRA
Analyst: MRA

Type of Analysis: Conventional Non-Safety Funded Project

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro 10	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2025 Opening Yr No-Build Peak Hr Intersection Delay	84.7 sec	500.0 sec
2025 Opening Yr No-Build Peak Hr Intersection V/C	3.77	5.00
2045 Design Yr No-Build Peak Hr Intersection Delay	420.6 sec	500.0 sec
2045 Design Yr No-Build Peak Hr Intersection V/C	5.00	5.00

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 5 years of crash data	Crash Severity: PDO	Injury Crash*	Fatal Crash*	
Angle	0	0	0	#DIV/0!
Head-On	0	0	0	#DIV/0!
Rear End	0	0	0	#DIV/0!
Sideswipe - same	0	0	0	#DIV/0!
Sideswipe - opposite	0	0	0	#DIV/0!
Not Collision w/Motor Veh	0	0	0	#DIV/0!
TOTALS:	0	0	0	0

Crash Type

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Conventional (Minor Stop)	Multilane Roundabout	Traffic Signal	N/A	N/A
Project Cost: (From CostEst Worksheet	*Additional description here*	*Additional description here*	*new pavement or overlay assun*		
Construction Cost	$0	$1,691,000	$270,000		
ROW Cost	$0	$186,000	$0		
Environmental Cost	$0	$0	$0		
Reimbursable Utility Cost	$0	$50,000	$5,000		
Design & Contingency Cost	$0	$477,000	$94,000		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	$0	$2,404,000	$369,000		
Traffic Operations:					
Traffic Analysis Software Used	Synchro 10	Synchro 10	Synchro 10		
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr		
2045 Design Yr Build Intersection Delay	420.6 sec / 500.0 sec	152.1 sec / 337.7 sec	22.3 sec / 23.2 sec		
2045 Design Yr Build Intersection V/C	5.00 / 5.00	1.52 / 2.00	1.53 / 1.53		
Safety Analysis:					
Predefined CRF: PDO	0%	32%	39%		
Predefined CRF: Fatal/Inj	0%	71%	40%		
Predefined CRF Source:	N/A	FHWA Clearinghouse #s 236 / 237	FHWA Clearinghouse #s 7982 / 7984		
User Defined CRF: PDO					
User Defined CRF: Fatal/Inj					
User Defined CRF Source (write in if applicable):					
Environmental Impacts:[1]					
Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		

*Note: If environmental impact is significant (**RED**), provide justification impact won't jeopardize project delivery using "Env" worksheet*

[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report*

Stakeholder Posture:					
Local Community Support	Neutral	Neutral	Neutral		
GDOT Support	Neutral	Neutral	Neutral		
Final ICE Stage 2 Score:	**-6.8**	**-1.3**	**3.5**		
Rank of Control Type Alternatives:	**3**	**2**	**1**		

Note: Stage 2 score is not given (shown as "**-**") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary):