Vinings Atlanta

Development of Regional Impact
(DRI #2620)

Traffic Impact Analysis

Cobb County, Georgia

October 19, 2016

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EXECUTIVE SUMMARY

A traffic impact analysis was performed for the proposed Vinings Atlanta mixed-use development located on Cumberland Parkway south of Pace Ferry Road and north of Atlanta Road in Cobb County, Georgia. The proposed development is to consist of 300 apartment units, 50 condominiums, 225 senior housing units, 200 assisted living units, a 300 room hotel, 100,000 square feet of office space, 23,103 square feet of retail, and a 78,000 square feet supermarket. The construction of the development is scheduled to be completed in 2019 with the tenancy being phased based on market demand.

Kaplan Morgan Real Estate Developments, LLC is actively completing the rezoning process for a parcel at the southeasterly intersection of Cumberland Parkway and Paces Walk with the intent to build a mixed-use development, Zoning Case Z-93 (2016). The zoning application is requesting the parcel of land be rezoned from CRC (Community Retail Commercial) to RRC (Regional Retail Commercial). The development will be located within a "Regional Activity Center" as designated by Cobb County's 2015 Future Land Use Map.

Since the mixed-use project exceeds the 400,000 square feet threshold to be designated as a Development of Regional Impact (DRI), the developer must follow a reviewing process outlined by the Georgia Regional Transportation Authority (GRTA). The ensuing analysis report is presented as part of a DRI Review Package per GRTA's standards for review by all interested stakeholders' to determine the regional impact of the development of Vinings Atlanta.

Intersection analyses were completed for the predetermined study network agreed upon by GRTA for the 2016 existing conditions of the network, the future year 2019 "No-Build" conditions, and the 2019 "Build" conditions.

Based on the results of the 2019 "No Build" traffic operations analysis, roadway improvements at Paces Ferry Road, adding a westbound right turn lane at the intersection of Paces Walk and Cumberland Boulevard, and optimizing signal timing splits at high volume intersections are recommended as System Improvement within the study network.

Based on all intersections and driveways operating at or above the standard Level of Service under the 2019 "Build" conditions, there are no Site Mitigation recommendations.

1. PROJECT DESCRIPTION

1.1. Introduction

Kaplan Morgan Real Estate Developments, LLC is actively completing the rezoning process for a parcel at the southeasterly intersection of Cumberland Parkway and Paces Walk with the intent to build a mixed-use development, Zoning Case Z-93 (2016).

Vinings Atlanta mixed-use development is expected to have 300 apartment units, 50 condominiums, 225 senior housing units, 200 assisted living units, a 300 room hotel, 100,000 square feet of office space, 23,103 square feet of retail, and a 78,000 square feet supermarket. Moreover, the site will provide a total of 2,372 parking spaces, 64 of which are on-street parking spaces and 2,308 of the spaces are located in parking decks. The construction of the development is scheduled to be completed in 2019 with the tenancy being phased based on market demand.

The development is located within a "Regional Activity Center" as designated by Cobb County's 2015 Future Land Use Map, and is nested within the Cumberland Community Improvement District (CID). Vinings Atlanta is consistent with the intended land use identified in Cobb County's Comprehensive Transportation Plan. Figure 1 shows the site location relative to the adjacent roadway network.

1.2. Site Plan

The development plan consists of 6 parcels labeled A - F. Parcel A, the largest of the site's parcels, will house the 78,000 square feet grocery store on the ground level, 300 apartment units distributed over 5 levels over the grocery store, 12,637 square feet of amenity style retail on the ground level, and 50 condominium units distributed over 5 levels. Parcel B will consist of the 100,000 square feet office space, and 5,232 square feet of amenity style retail. Parcel C will house the 300-room hotel and 5,234 square feet of amenity style retail, and the abutting Parcel D will be a community green space. Parcel E and Parcel F will consist of the 200 Age-restricted living units and 225 senior living units, respectively.

The development site plan proposes access points on Cobb Galleria Parkway with the following configurations:

- *Site Driveway 1*: Full access at the proposed signalized intersection of Cumberland Parkway and Vinings Atlanta Driveway #1.
- *Site Driveway 2*: Right-in/Right-out driveway at the southern boundary of the development on Cumberland Parkway.
- *Site Driveway 3*: Full access driveway at the northeastern boundary of the development on Paces Walk.

There will be designated crosswalks and sidewalks throughout and surrounding the Vinings Atlanta development to provide interconnectivity between the various land uses. Please refer to the site plan shown in Figure 2 for details. A full-size site plan is submitted as part of the Review Package per GRTA's Site Plan Guidelines.

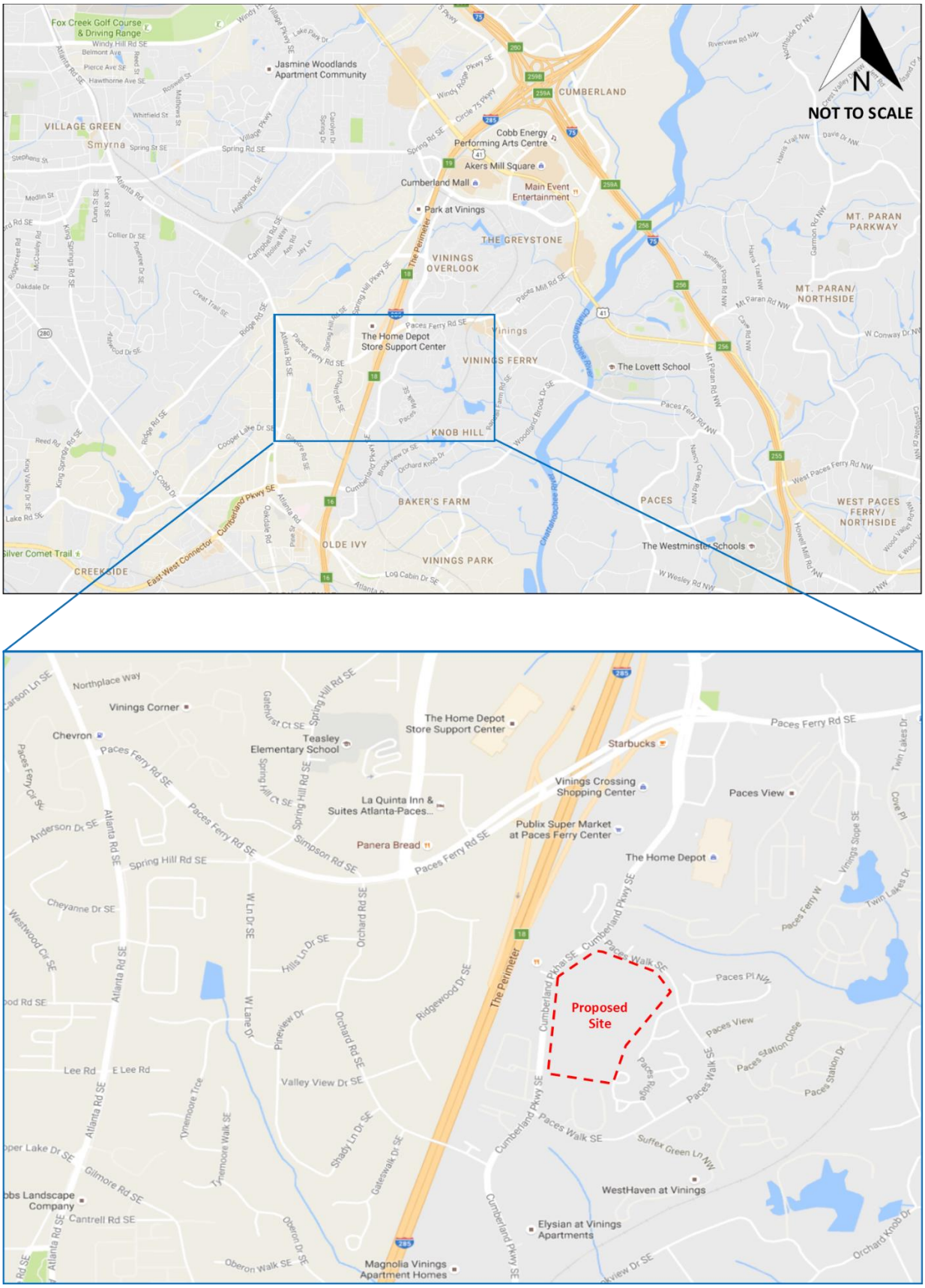


Figure 1: Site Location

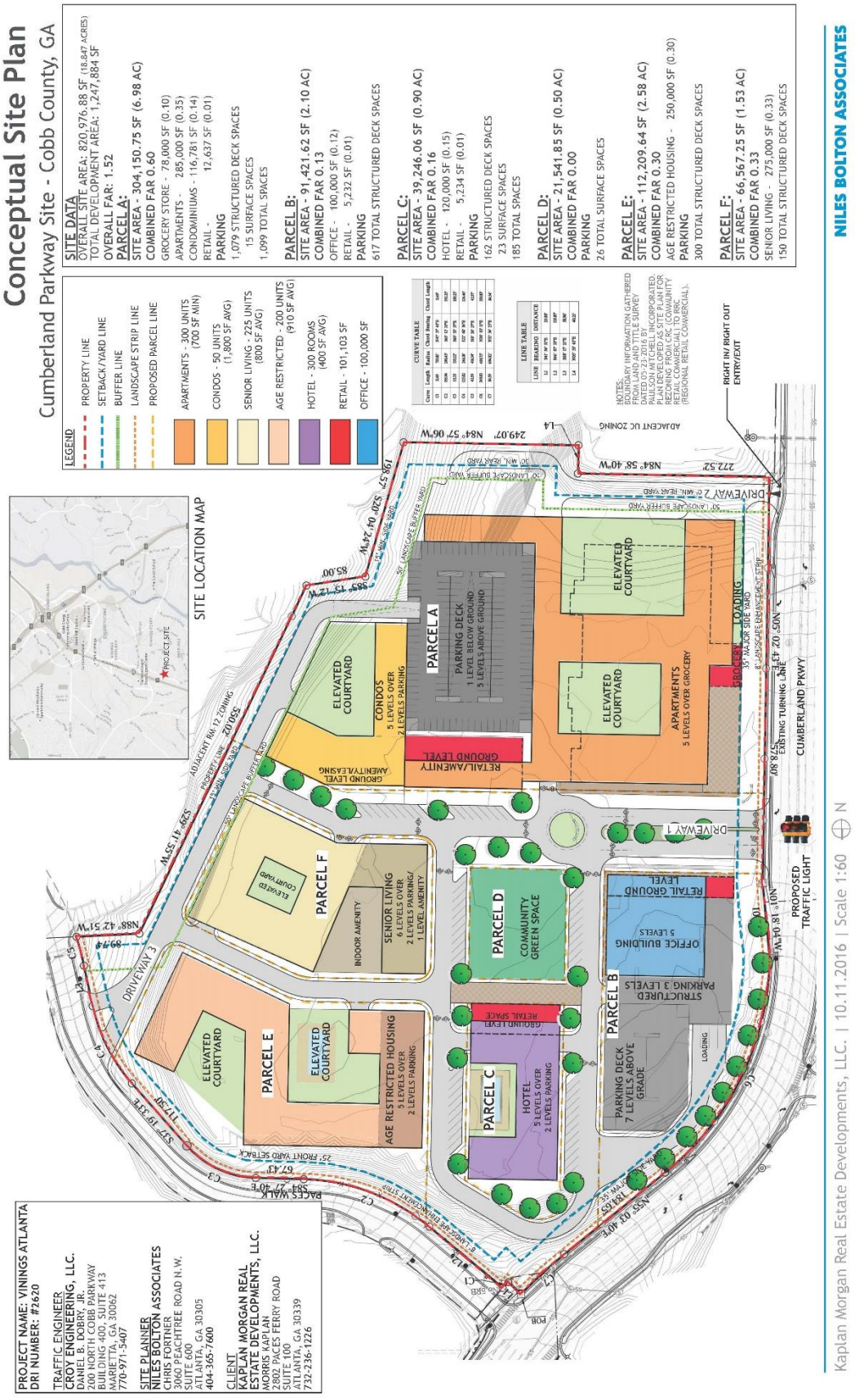


Figure 2: Vinings Atlanta Site Plan

1.3. Existing Roadway Facilities

The Vinings Atlanta development will be on the southernmost end of the Cumberland Community Improvement District (CID) neighboring residential, retail, and office land uses. The Cumberland CID serves a mix of uses, including office, retail/commercial, recreation, cultural, convention, and residential.

Cumberland Parkway is a four-lane undivided roadway with a centered two-way left-turn lane that extends from Cumberland Boulevard to Atlanta Road. It is classified as an urban minor arterial by GDOT and as an arterial by Cobb County. The posted speed limit along Cumberland Parkway is 35 miles per hour. Table 1 summarizes the character of the roadway facilities located within proximity to the site. Figure 3 shows an aerial of the surrounding roadway network and major traffic draws in the area relative to the proposed site location.

Table 1: Existing Roadways in the Vicinity of Vinings Atlanta

Roadway	No. of Lanes	Speed Limit	GDOT Classification	Cobb County Classification
Cumberland Parkway	4-Lane Undivided	35 MPH	Urban Minor Arterial	Arterial
Atlanta Road	4-Lane Undivided/ 6-Lane Divided	45 MPH	Urban Minor Arterial	Arterial
Paces Ferry Road	4-Lane Undivided	35 MPH	Major Collector	Arterial
Cumberland Boulevard	4- Lane Divided	35 MPH	Urban Minor Arterial	Arterial
Interstate 285	8- Lane Divided	65 MPH	Urban Interstate Principal Arterial	n/a

1.4. Transit Facilities

The closest transit system to this intersection is the Cobb LINC Route No. 20 (HD), which operates along Cumberland Parkway between Cumberland Boulevard and Atlanta Road and along Atlanta Road between King Springs Road and Cumberland Parkway. The route provides service during peak hours only. The closest bus stop accessible to pedestrians along this segment of roadway is located 775’ north of the development’s main driveway on Cumberland Parkway.

1.5. Bicycle and Pedestrian Facilities

Within the immediate vicinity of the project location, there are existing sidewalks along both sides of Cumberland Parkway to accommodate pedestrian activity. The proposed development will provide pedestrian access in accordance with Cobb County development requirements. The existing sidewalks on Cobb Galleria Parkway connects pedestrians to a shared path network of multi-use trails along Cumberland Parkway north of Mount Wilkinson Parkway and along Atlanta Road and the East-West Connector to the south. Figure 4 shows the extent of the multi-use trail network in the Cumberland CID, including existing, programmed, and proposed trails.

Blueprint Cumberland identifies planned joint bike-pedestrian facility improvements on Cumberland Parkway between Cumberland Boulevard and Atlanta Road.

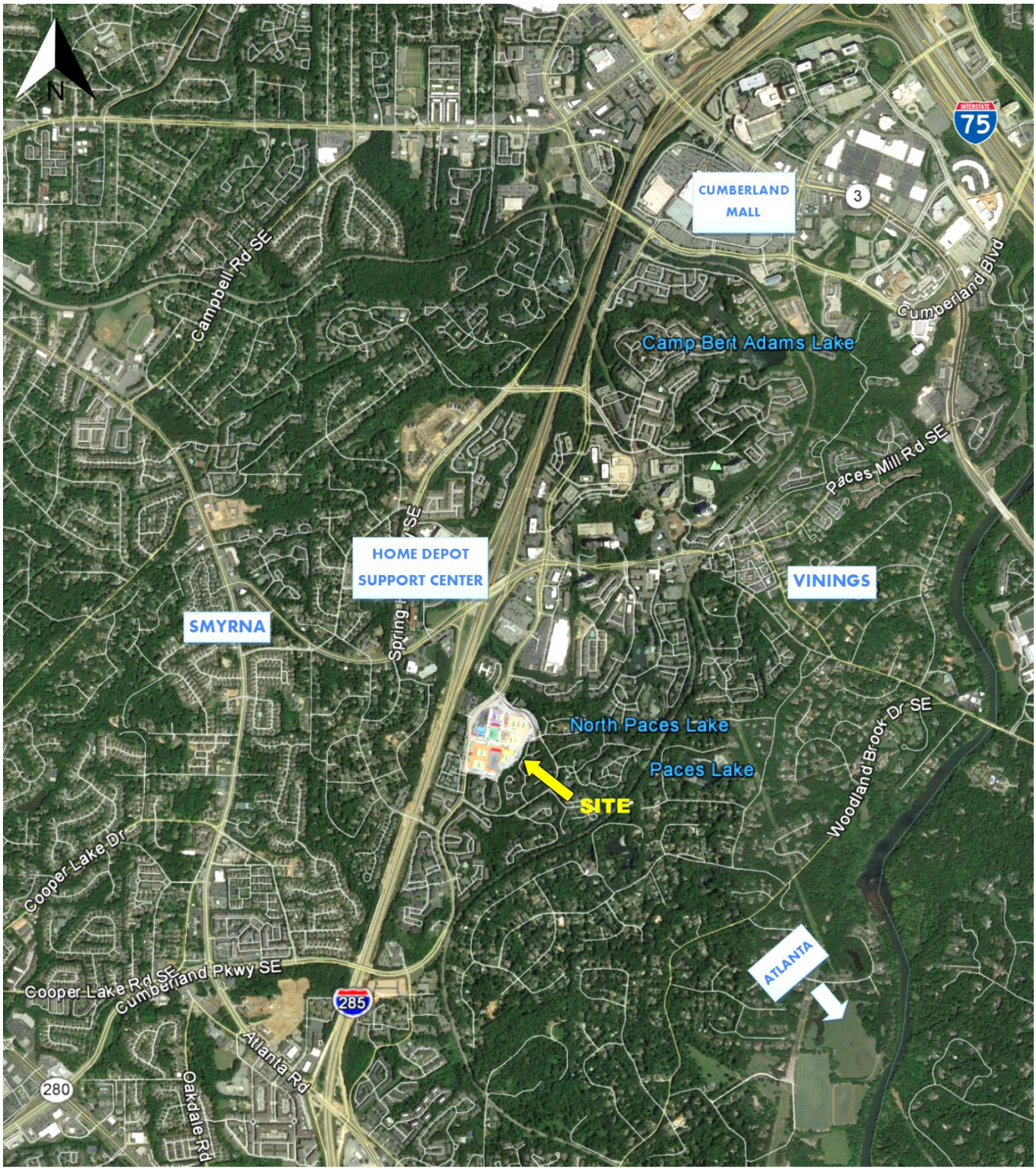
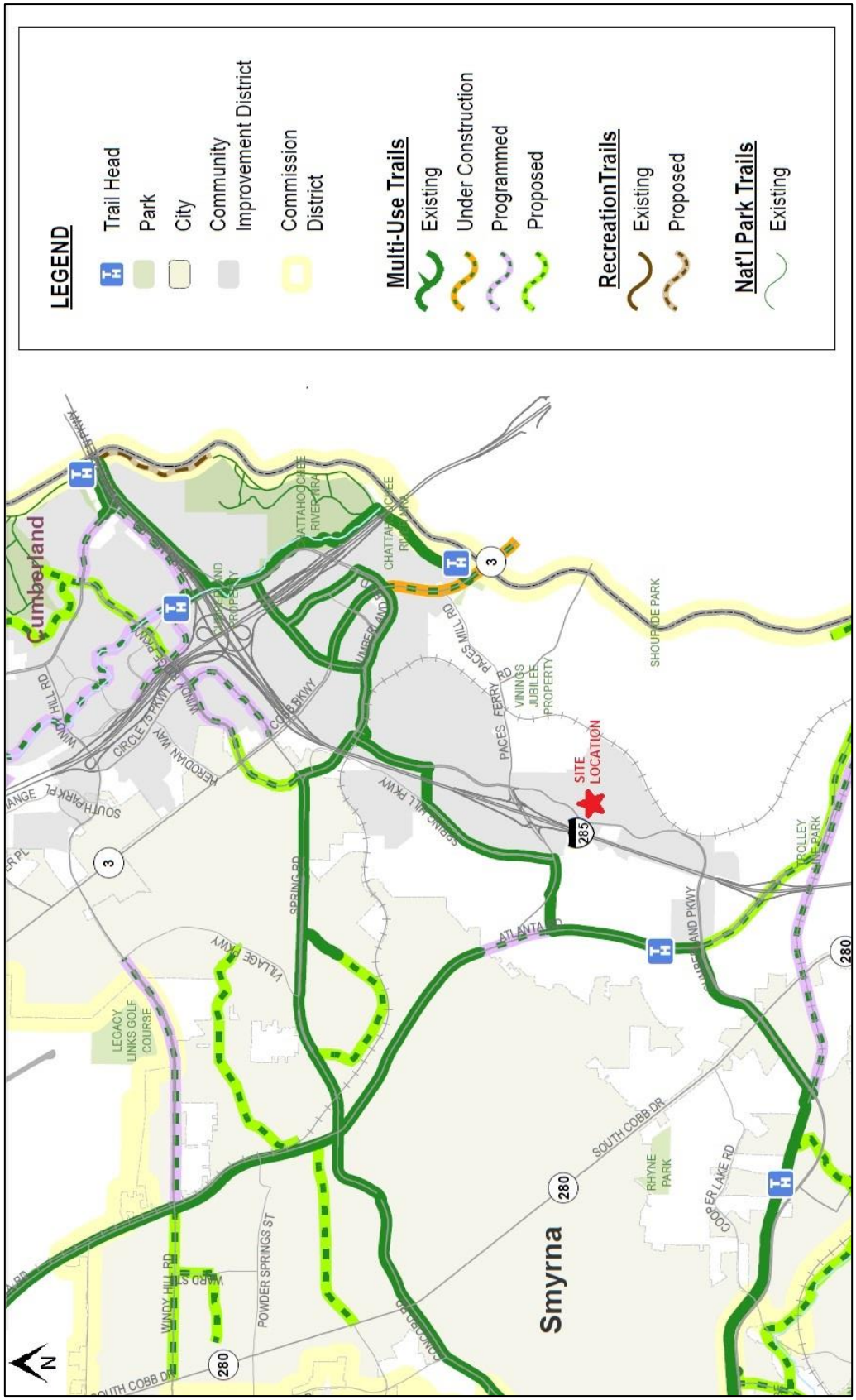


Figure 3: Aerial of Site Location Relative to Adjacent Roadway Network



Source: Cobb County Trail Planning Map. Cobb County: Dept. of Transportation, 2016.

Figure 4: Cobb County's Multi-Use Trail Network Surrounding Site Location

1.6. Planned and Programmed Improvements

The Regional Transportation Plan (Plan 2040), Georgia Department of Transportation TransPI, Cobb County Comprehensive Transportation Plan, and Blueprint Cumberland were reviewed to determine projects that are planned within the vicinity of the proposed development. The identified projects were combined and are shown in Table 2 below.

Table 2: Planned and Programmed Improvements

PROJECT #	PROJECT	TYPE OF IMPROVEMENT	SOURCE
CO-452 / P.I. 0012774	I-75 North - Diverging Diamond Interchange at Windy Hill Road	Roadway / Interchange Upgrade	ARC Plan 2040
CO-454 / P.I. 0011738	Windy Hill Road Widening from US 41 TO I-75	Roadway / General Purpose Capacity	ARC Plan 2040
CO-AR-070	I-285 at Atlanta Road Interchange Improvements	Interchange and Grade Separation	ARC Plan 2040
CO-457	I-285 at Cobb Pkwy (US 41/SR 3) Interchange - Improvements to include access with Spring Rd and Cumberland Blvd	Interchange and Grade Separation	Cobb CTP Update 2040
CO-459	I-285 Pedestrian and Transit Bridge	Transit	Cobb CTP Update 2040
R-017	Gilmore Rd - Intersection improvements, turn lanes, and sidewalks	Safety and Operational	Cobb CTP Update 2040
R-105	Cobb Pkwy (US 41/SR 3) at Windy Hill Rd Intersection	Interchange and Grade Separation	Cobb CTP Update 2040
R-119	Paces Ferry Rd at Woodland Brook Dr - Construct roundabout to replace existing signalized 3-legged road	Safety and Operational	Cobb CTP Update 2040
R-277	Spring Rd and Cumberland Blvd - Intersection improvements, median and electronic message signs	Safety and Operational	Cobb CTP Update 2040
R-472	Woodland Brook Dr over Vinings Branch - Replace deficient bridge with culvert	Bridge	Cobb CTP Update 2040
R-502	I-285 at Cobb Pkwy (US 41/SR 3) Interchange - Improvements	Interchange and Grade Separation	Cobb CTP Update 2040
R-518	Cumberland Blvd Safety and operational improvements, turn lanes, sidewalks	Safety and Operational	Cobb CTP Update 2040
R-525	I-285 EB/WB Auxiliary Lanes - Auxiliary Lanes	Roadway Capacity	Cobb CTP Update 2040
AR-475	Connect Cobb High Capacity Transit (BRT) Phase 1 - BRT from Kennesaw to Cumberland	Transit	Cobb CTP Update 2040
AR-959	Revive 285 - I-75 North/I-285 Interchange Improvements - Flyover ramp from I-75 NB to I-285 WB	Interchange and Grade Separation	Cobb CTP Update 2040
AR-960	Revive 285 - I-75 North/I-285 Interchange Improvements - Flyover ramp from I-75 SB to I-285 WB	Interchange and Grade Separation	Cobb CTP Update 2040
AR-ML-200	I-285 North Managed Lanes and CD Improvements	Managed Lanes	Cobb CTP Update 2040
INV-T-001	Cumberland Transfer Center Relocation	Transit	Cobb CTP Update 2040
	US Highway 41 Improvements	Highway Improvement	Cumberland CID Website
	Cobb Pkwy (US 41) Bridge Replacement & Trail	Roadway/ Bridge Capacity	Blueprint Cumberland

	Cobb Pkwy (US 41) Widening & Trail	Roadway/ General Purpose Capacity	Blueprint Cumberland
	Cumberland Blvd W Intersection Improvements & Phase III Pedestrian Facilities	Roadway/ General Purpose Capacity	Blueprint Cumberland
	Cobb Parkway Pedestrian Facilities Central	Pedestrian Facility	Blueprint Cumberland
	Cobb Parkway Pedestrian Facilities North	Pedestrian Facility	Blueprint Cumberland
	Restripe Local Roads for Bikeways/Sharrows	Bicycle Facility	Blueprint Cumberland
	Cumberland Parkway between Cumberland Boulevard and Atlanta Road Pedestrian Improvements	Joint Bike - Ped Facility	Blueprint Cumberland
	Akers Mill Road Pedestrian Bridge	Pedestrian Facility	Blueprint Cumberland
	U.S. 41 (Cobb Parkway) Pedestrian Bridge	Pedestrian Facility	Blueprint Cumberland
	Akers Mill Square Property	Pedestrian Facility	Blueprint Cumberland
	Cumberland Mall Property	Pedestrian Facility	Blueprint Cumberland

The planned improvements that will have the most direct impact on the traffic surrounding Vinings Atlanta would be the interchange improvements at Interstate 285 and Atlanta Road, the Cumberland Boulevard Safety and Operational improvements, the Revive 285 HOV/Express Lanes, the pedestrian improvements on Cumberland Parkway between Cumberland Boulevard and Atlanta Road, and the intersection improvements at Gilmore Road.

The interchange improvements at Atlanta Road are currently under construction and should be "on-line" prior to Vinings Atlanta build out year. The Cumberland Boulevard Safety and Operational improvements are currently out for construction bid, and will be "on-line" prior to the build out year. These improvements include roadway construction, signing and marking, and signal timing modifications at the intersection of Cumberland Boulevard and Cumberland Parkway, which is one of the study network intersections. The signal timing modifications would be removing split phasing from the Cumberland Boulevard movements. The roadway construction will involve adding a fourth lane to the southbound Cumberland Mall Driveway movement, creating a dedicated right-turn lane, two through lanes, and a dedicated left-turn lane. For the Cumberland Boulevard westbound movement, a fourth lane will be added and the existing shared through/left lane will be restriped to a left turn only lane, which will create dual left lanes, a dedicated through lane, and a shared through/right lane. These improvements were included in the "No Build" conditions for the traffic operations analysis.

The Revive 285 HOV/Express Lanes, pedestrian improvements on Cumberland Parkway and intersection improvements at Gilmore Road are Long Range and will be "on-line" after Vinings Atlanta is built out.

2. STUDY NETWORK

2.1. Trip Generation

ITE Trip Generation Manual, 9th edition, was used to quantify the new trips generated by the Vinings Atlanta mixed-use development. For the proposed retail located on Parcels A, B, and C, ITE's "Specialty Retail Center" land use code was used because it captures the nature of the amenity-type goods and services the three buildings will provide to the adjoining anchor land uses as shown in the site plan (Figure 2).

Per GRTA's Letter of Understanding, a 5% reduction was applied to the generated trips to account for alternate modes of travel. These alternative modes of travel include the aforementioned Cobb LINC bus route as well as the Cumberland CID Commuter Club services including vanpools, carpools, and teleworking. For a conservative analysis, ITE Trip Generation Handbook, 3rd edition standards for mixed-use reductions and pass-by trip reductions were used where applicable. The reduction of pass-by trips for the development falls below the 15% maximum identified in GRTA's Technical Guidelines. Table 3 shows the total two-way daily volumes and the peak morning and afternoon volumes per ITE Land Use Code (LUC). Trip generation and reduction tables are in Appendix A.

Table 3: Vinings Atlanta Net Trip Generation

Description	LUC	Unit	Quantity	Daily	AM Peak			PM Peak		
				Two-way	Enter	Exit	Total	Enter	Exit	Total
Apartments	220	Dwelling Units	300	1,942	30	121	151	119	64	183
Condominiums	230	Dwelling Units	50	352	5	25	30	23	11	34
Senior Housing (Attached)	252	Dwelling Units	225	692	15	30	45	30	26	56
Assisted Living	254	Beds/Units	200	419	18	10	28	19	25	44
Hotel	310	Rooms	300	2,312	94	65	159	92	88	180
Office	710	SQ FT/1000	100	1,313	168	23	191	32	158	190
Specialty Retail	826	SQ FT/1000	23.1	1,026	110	119	229	65	51	116
Supermarket	850	SQ FT/1000	78	6,614	164	101	265	331	318	648
Total without Reductions				**14,670**	**604**	**494**	**1,098**	**711**	**741**	**1,451**
Mixed-Use Reduction - incl. 5% Transit (Residential)				*-237*	*-4*	*-15*	*-19*	*-91*	*-46*	*-137*
Mixed-Use Reduction - incl. 5% Transit (Hotel)				*-280*	*-5*	*-17*	*-22*	*-20*	*-8*	*-28*
Mixed-Use Reduction - incl. 5% Transit (Office)				*-304*	*-24*	*-7*	*-31*	*-12*	*-33*	*-45*
Mixed-Use Reductions - incl. 5% Transit (Retail + Supermarket)				*-775*	*-30*	*-19*	*-49*	*-75*	*-111*	*-186*
Retail Pass-by Trips (0%)34%				*-170*	*0*	*0*	*0*	*-8*	*-2*	*-10*
Supermarket Pass-by Trips (0%)36%				*-1,550*	*0*	*0*	*0*	*-72*	*-63*	*-135*
Total with Reductions				**11,354**	**541**	**436**	**977**	**433**	**478**	**910**

2.2. Trip Distribution

Preliminary trip distribution percentages for the Vinings Atlanta site were based on existing traffic patterns of residents and office employees, surrounding Cumberland CID land uses, and relative locations of major roadways and interstates that will serve the development. Due to the mixed-use nature of the development, the distribution of vehicular trips entering and existing the location varies per the four land uses. Input from the Pre-Review DRI meeting was combined with engineering judgement to determine the final directional distribution and assignment of new project trips. Figure 5 shows the regional trip distribution of Vinings Atlanta's generated trips.

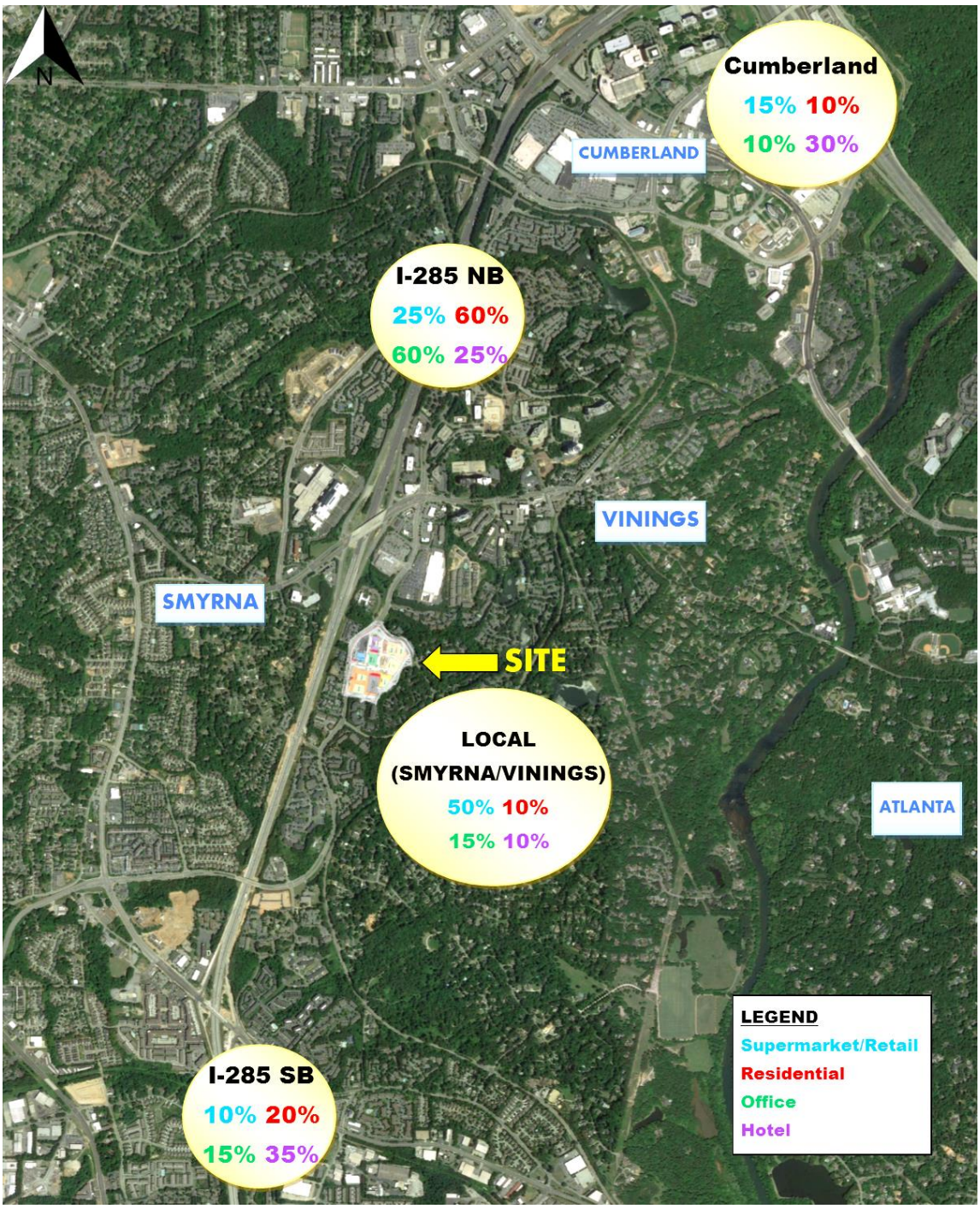


Figure 5: Trip Distribution of Generated Trips on Adjacent Roadways

2.3. Study Intersections

Appropriate service flow volume for the road segments in the area surrounding the Vinings Atlanta site were assigned based on the type of roadway and a LOS standards as designated in Table 5.4 of GRTA's DRI Review Package Technical Guidelines. The percent of service flow volume used by the project's traffic was calculated for each adjacent roadway using the preliminary trip distribution percentages in Figure 5.

Every roadway segment starting from the site location that consumed more than 7% of the service volume was included in the initial study network. Following the DRI Pre-review meeting, the study network was refined per GRTA's Letter of Understanding, and includes the following intersections:

- Atlanta Road at Cumberland Parkway
- Paces Walk at Cumberland Parkway
- Paces Ferry Road at Cumberland Parkway
- I-285 Northbound Ramps at Paces Ferry Road
- I-285 Southbound Ramps at Paces Ferry Road
- Cumberland Boulevard at Cumberland Parkway

The study intersections were analyzed for the Existing 2016, 2019 "No Build", and 2019 "Build" morning and afternoon peak hour conditions. Additionally, the proposed site driveways along Cumberland Parkway and Paces Walk were analyzed for the 2019 "Build" condition.

2.4. Traffic Assignment

Following the GRTA 7% Rule Analysis to determine the study intersections, a detailed traffic assignment of the generated trips was developed for each maneuver at the study intersections. The trip distribution percentages at each of the study intersections were based on the preliminary trip distributions (Figure 5), comments from the Pre-review meeting, and an analysis of the character of the region's major roadways and activity centers. The trip distribution at the study intersections is shown in Figure 6. Percentages from Figure 6 were then applied to the peak hour trips generated by the Vinings Atlanta development, and Figure 7 shows the generated trips distributed by intersection during the morning and afternoon peak hours.

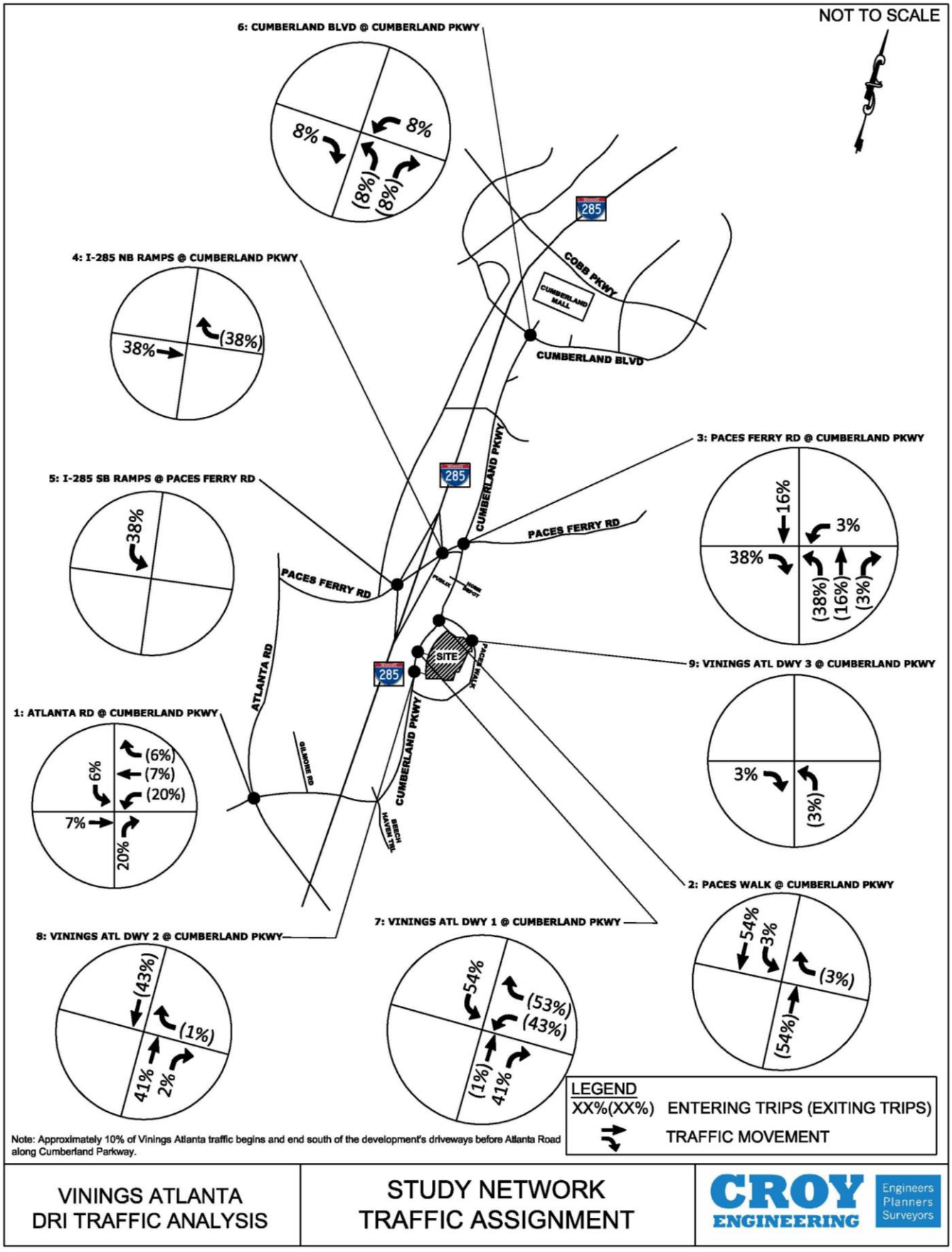


Figure 6: Vinings Atlanta Traffic Assignment

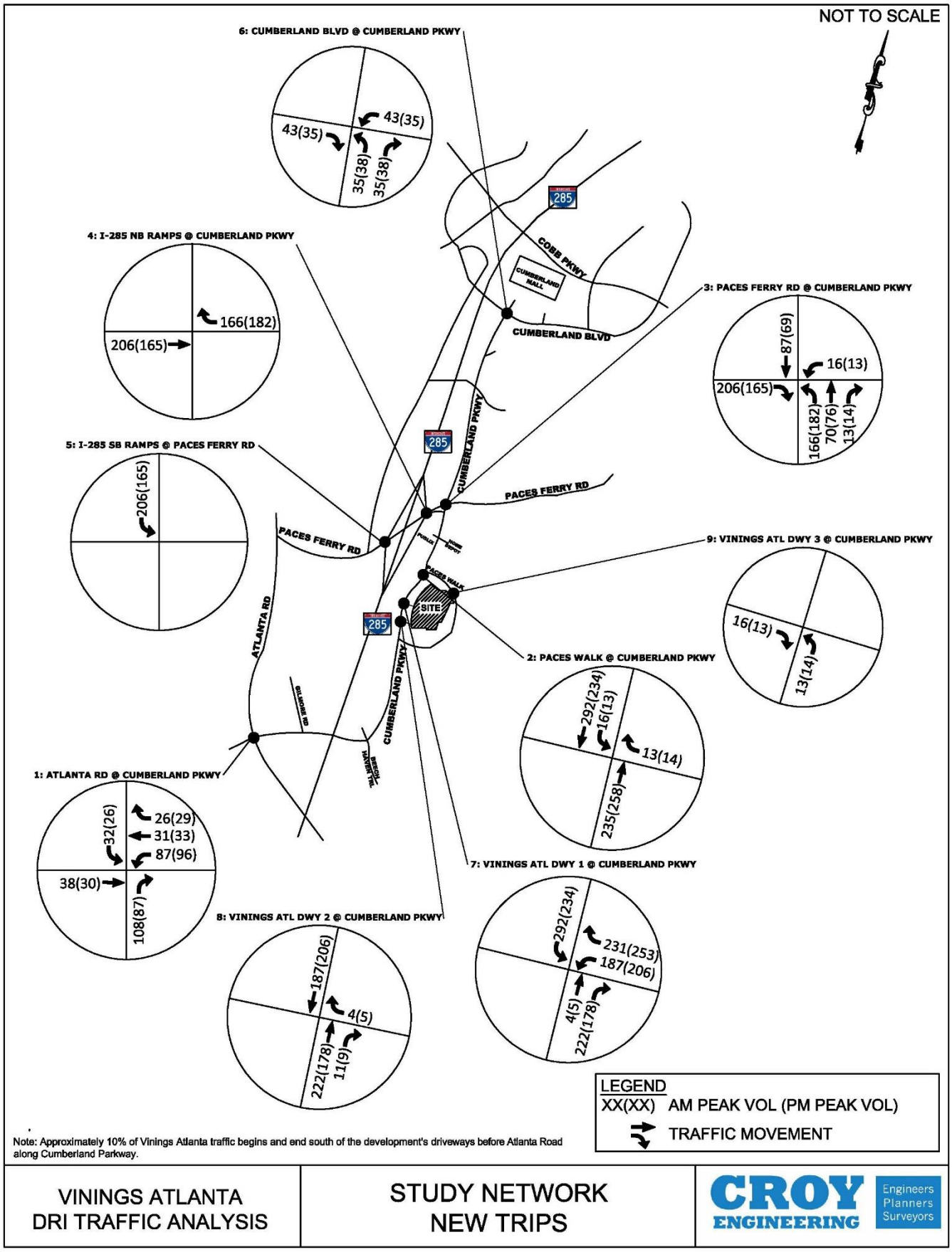


Figure 7: Vinings Atlanta Projected Trips

3. LEVEL OF SERVICE ANALYSIS

3.1. Traffic Analysis Methodlogy

The Transportation Research Board's Highway Capacity Manual, 2010 edition (HCM 2010) methodology using Synchro software (Version 9) was used to analyze level of service and delay at study intersections. Level of Service (LOS) is defined as a qualitative measure that describes operational conditions and motorists perceptions within a traffic stream. The HCM defines six levels of service, which are defined by controlled delay. The LOS criteria for signalized and unsignalized intersections are given in Table 4. Levels of service are reported for individual movements as well as for the intersection as a whole; thus, an individual movement of an intersection may experience a low level of service, while the intersection as a whole may operate acceptably.

For signalized intersections, LOS and capacity analyses are necessary to determine the overall operation of the intersection. The capacity analysis of an intersection is defined by a volume to capacity ratio (v/c) for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic on the roadway has exceeded the capacity available, resulting in a temporary surplus of demand.

For unsignalized intersections, the only criteria for evaluating traffic operation are the LOS of the turning movements and the overall intersection. Levels of service for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches. Low levels of service for side street approaches are not uncommon, as vehicles may experience delay in turning onto a major roadway.

Table 4: Level of Service Criteria for Signalized and Unsignalized Intersections

	SIGNALIZED	UNSIGNALIZED
Level of Service	**Average Delay (sec)**	**Average Delay (sec)**
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

The assumed LOS standard for the Cumberland CID is "D" or better. If the existing LOS at the study intersections is "E" or "F", the future "No Build" and future "Build" LOS standard will be LOS "E", consistent with GRTA's Letter of Understanding.

3.2. 2016 Existing Traffic Analysis

Existing traffic counts, intersection geometric designs, and signal timing data were obtained at the following study intersections:

1. Atlanta Road at Cumberland Parkway
2. Paces Walk at Cumberland Parkway
3. Paces Ferry Road at Cumberland Parkway
4. I-285 Northbound Ramps at Paces Ferry Road
5. I-285 Southbound Ramps at Paces Ferry Road
6. Cumberland Boulevard at Cumberland Parkway

Turning movement counts were conducted at the aforementioned six intersections between 7:00 – 9:00 AM and 4:00 – 6:00 PM on Tuesday, August 23, 2016 while Cobb County schools were in session. The morning and afternoon peak hours varied amongst the six intersections. For traffic volume continuity between the study network intersections, a uniform average peak hour was determined for all of the intersections. The morning peak hour was designated from 7:30 AM to 8:30 AM, and the afternoon peak hour was from 5:00 PM to 6:00 PM. Figure 8 displays the existing traffic volumes inside of the study network, and Figure 9 displays the lane geometry and traffic control at the study intersections. All raw count data is included in Appendix B. All other pertinent traffic data for the study network is included in Appendix C.

These volumes along with their peak hour factors (PHF) and truck percentages were input in Synchro 9.0, and a traffic operation analysis for 2016 existing conditions was completed. The results of the analysis are shown in Table 5. Synchro output tables are in Appendix D.

Table 5: 2016 Existing Traffic Operations by Intersection

	Intersection	Traffic Control	AM	PM
1	**Atlanta Road @ Cumberland Parkway**	Signalized	**E (75.8 s)**	**E (73.7 s)**
	Eastbound Approach		*F (81.6 s)*	*D (52.0 s)*
	Westbound Approach		*E (65.3 s)*	*F (114.6 s)*
	Northbound Approach		*E (69.8 s)*	*D (51.0 s)*
	Southbound Approach		*E (70.1 s)*	*F (84.5 s)*
2	**Paces Walk @ Cumberland Parkway**	Unsignalized	**n/a***	**n/a***
	Eastbound Approach *(Brookdale Senior Living)*		*E (48.1 s)*	*C (18.9 s)*
	Westbound Approach *(Paces Walk)*		*E (47.1 s)*	*B (14.6 s)*
	Northeast-bound Approach *(Cumberland Pkwy)*		*n/a*	*n/a*
	Southwest-bound Approach *(Cumberland Pkwy)*		*n/a*	*n/a*
3	**Paces Ferry Road @ Cumberland Parkway**	Signalized	**F (149.5 s)**	**F (140.4 s)**
	Eastbound Approach		*D (35.7 s)*	*D (42.8 s)*
	Westbound Approach		*D (35.2 s)*	*D (35.1 s)*
	Northbound Approach		*F (311.9 s)*	*F (90.9 s)*
	Southbound Approach		*D (46.1 s)*	*F (371.2 s)*
4	**I-285 Northbound Ramps @ Paces Ferry Road**	Signalized	**C (28.0 s)**	**D (35.2 s)**
	Eastbound Approach		*C (22.5 s)*	*C (33.3 s)*
	Westbound Approach		*C (20.8 s)*	*C (27.7 s)*
	Northbound Approach		*E (64.4 s)*	*E (61.4 s)*
5	**I-285 Southbound Ramps @ Paces Ferry Road**	Signalized	**F (200.9 s)**	**D (46.8 s)**
	Eastbound Approach		*B (14.2 s)*	*C (21.5 s)*
	Westbound Approach		*C (20.3 s)*	*C (24.1 s)*
	Southbound Approach		*F (478.8 s)*	*F (129.9 s)*
6	**Cumberland Boulevard @ Cumberland Parkway**	Signalized	**E (57.0 s)**	**F (117.1 s)**
	Northbound Approach		*E (63.3 s)*	*E (63.1 s)*
	Southbound Approach		*E (70.4 s)*	*E (63.7 s)*
	Southeast-bound Approach		*D (53.9 s)*	*E (56.5 s)*
	Northwest-bound Approach		*C (33.4 s)*	*F (198.3 s)*

* For unsignalized intersections' with stop control only on the minor street, LOS are only reported for the side street approaches.

As shown in Table 5, multiple intersections in the study network are currently operating below the acceptable Level of Service standards during the morning and afternoon peak hours. Particularly Paces Ferry Road at Cumberland Parkway is operating at LOS F in both peak hours, I-285 Southbound Ramps at Paces Ferry Road is operating at LOS F during the morning peak hour, and Cumberland Boulevard at Cumberland Parkway is operating at a LOS F during the afternoon peak hour.

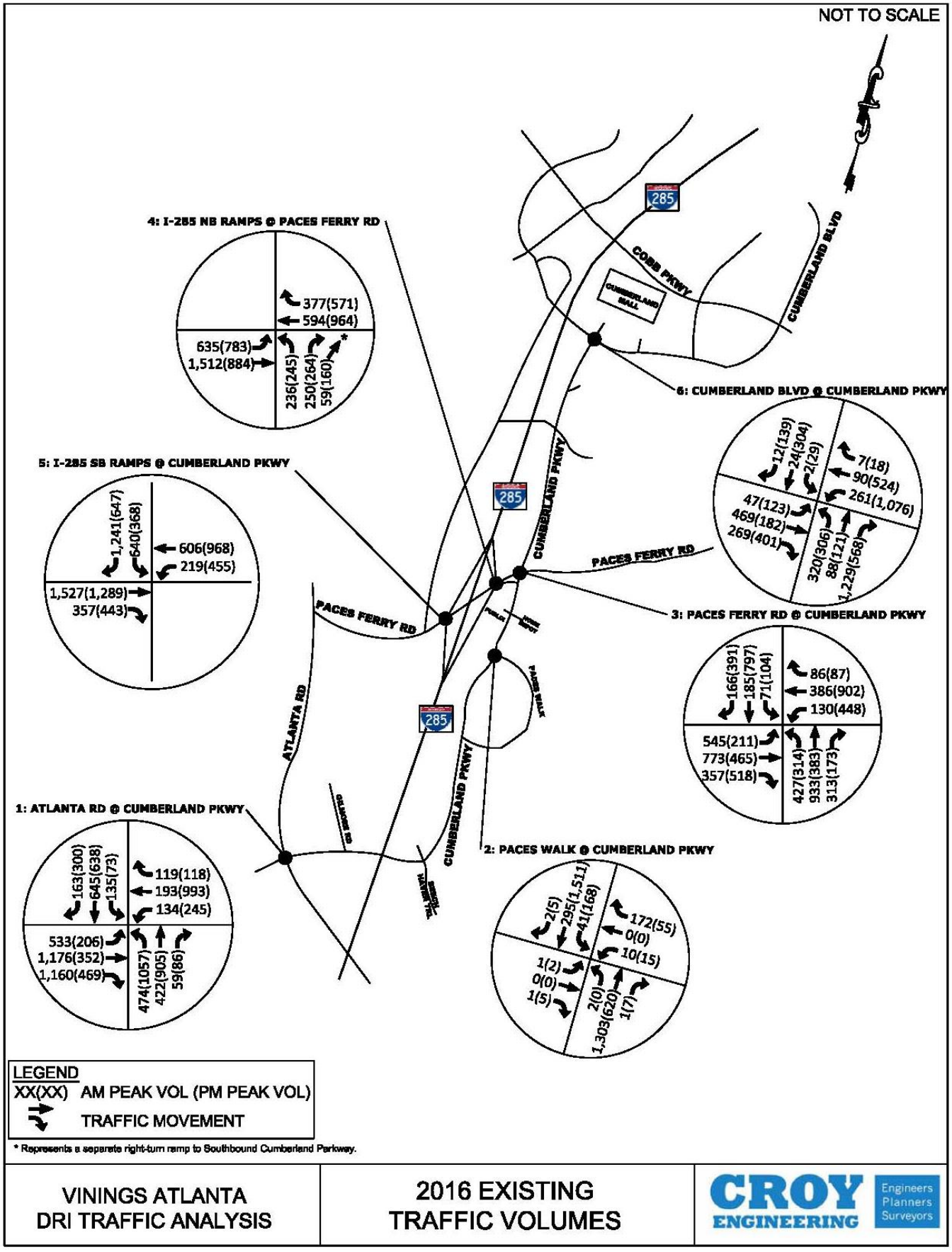


Figure 8: 2016 Existing Traffic Volumes

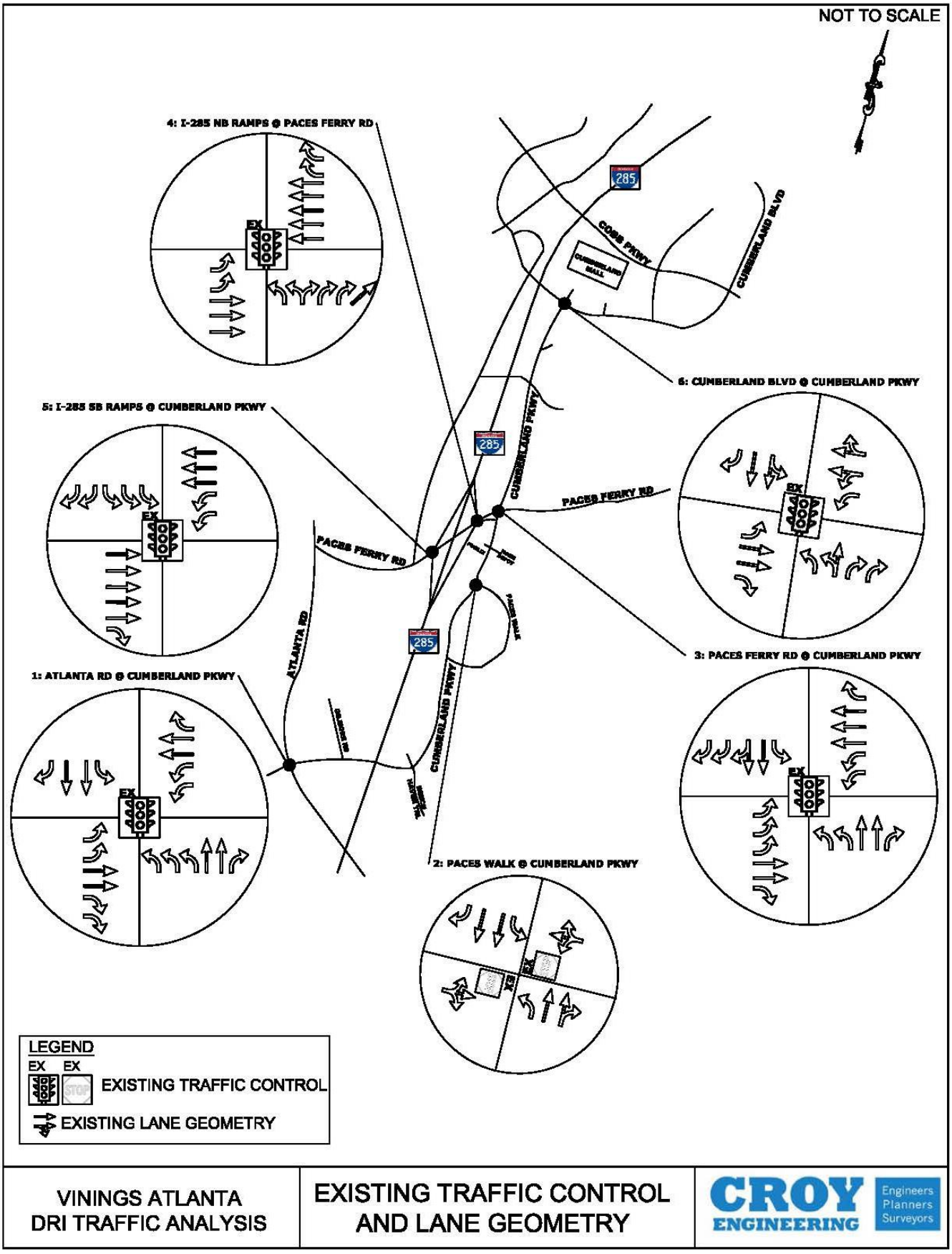


Figure 9: Existing Lane Geometry and Traffic Control at Study Intersections

3.3. Annual Traffic Growth and Background Traffic

The Atlanta Regional Commission's Travel Demand Model (ARC TDM) projected future traffic volumes was used to determine the growth factor versus historical trends because the ARC TDM provided a better representation of projected 2019 traffic given the significant number of programmed improvements planned for the region. Following the preliminary review of the proposed DRI, a 2.0% growth rate was agreed upon per GRTA's Letter of Understanding.

3.4. 2019 "No Build" Traffic Analysis

In the "No Build" scenario, the existing 2016 traffic volumes were grown at the agreed upon 2.0% annual growth rate to Vinings Atlanta's projected build out year of 2019, as shown in Figure 10. A traffic operation analysis was completed for 2019 "No Build" conditions. The results of the analysis is shown in Table 6. Synchro output tables are in Appendix D.

3.5. System Improvements Analysis

Improvements that are identified as "System Improvements" address deficiencies that are found in the study network for the "No Build" conditions without the addition of traffic from the proposed development. The following System Improvements result in the overall study network and particular intersections operating at or above the standard level of service, except where stated otherwise. These are recommended for consideration in future local and state transportation planning.

Intersection Improvements at Paces Ferry Road and Cumberland Parkway

In 2019 under the "No Build" conditions, Paces Ferry Road at Cumberland Parkway would be operating at a LOS F for both the morning and afternoon peak hours. In the morning, the majority of the delay is contributed to the northbound maneuvers, and in the afternoon, the southbound maneuvers. This signifies that there is a heavy amount of through volumes traveling along Cumberland Parkway through the intersection. For the northbound lane group, making the right turn lane into a shared through/right turn lane and extended the lane back an additional 350 feet would create more capacity for through traffic. Extending the outermost northbound lane north of Paces Ferry Road to the driveway of 2500 Cumberland Parkway's parking decks, approximately 1,300 feet north of Paces Ferry Road, would accommodate this additional northbound through lane traffic.

For the southbound lane group, taking away the median, which starts at Bert Adams Road, and adding an additional southbound through lane adds capacity for the southbound through traffic in the afternoons. For the outermost southbound lane south of Paces Ferry Road, which currently terminates just south of Chick Fil-A/Starbucks unsignalized driveway, setting the eastbound right turn island back to accommodate the third southbound lane and extending the lane down to Publix/Home Depot's signalized driveway and terminating it as a right-turn only lane into Publix's Driveway would add capacity and reduce the amount of weaving at these busy driveways.

Moreover, there are high volumes of traffic making eastbound right turns and westbound left-turn from Paces Ferry Road onto Cumberland Parkway south. Extending the innermost westbound left turn lane back approximately 400 feet to the existing raised median on Paces Ferry Road and adding an additional eastbound right-turn lane and extending both right turn bays back approximately 250 feet would add capacity for these maneuvers.

Adding a Westbound Right-turn bay at Paces Walk and Cumberland Parkway

The single westbound lane on Paces Walk results in excessive delay for vehicles wishing to make a right turn due to vehicles in front of them to make a left turn onto Cumberland Parkway, which is more difficult to negotiate. Adding a right turn lane eases the congestion for this maneuver. Survey and construction drawing may be needed to verify the feasibility and extent of additional right-of-way required for this improvement as topography on Paces Walk could potentially be an issue.

Optimizing Signal Timing Splits at High Volume Intersections

The Cumberland CID traffic signals all operate under an intelligent traffic management system, Sidney Coordinated Adaptive Traffic System ® (SCATS), that considers multiple aspects of traffic control and respond to the demands of the network in real time. Optimizing signal timing splits aid in truly modeling the real time adaptive signal timing at the study network intersections. Signal split timings were optimized at high volume intersections, which included Atlanta Road at Cumberland Parkway, Paces Ferry Road at Cumberland Parkway, and I-285 Southbound Ramps at Paces Ferry Road. Optimizing signal timing splits also takes into account anticipated signal maintenance along signalized corridors over time. It is important to note that, although signal timing splits were optimized, signalized intersections cycle lengths were held constant at all intersections reflecting the coordinated nature within the traffic signal network.

I-285 Southbound Ramps at Paces Ferry Road Right Turns

Although optimizing timing at the I-285 Southbound Ramps "No Build" system improvements significantly improved the LOS and delay at the intersection, the sheer number of southbound right turns coupled with the potential with new developments west of I-285 along Paces Ferry Road could potentially need roadway improvements for mitigation. Adding an additional right turn lane may be beneficial in the future, however, a more detailed analysis would be required to determine the feasibility of such improvements at the intersection.

A traffic operation analysis was completed for 2019 "No Build" conditions with the recommended System Improvements. The results of the analysis is included in Table 6. Synchro output tables are in Appendix D.

Table 6: 2019 "No Build" Traffic Operations by Intersection

	Intersection	Traffic Control	No Improvements		w. System Improvements	
			AM	PM	AM	PM
1	**Atlanta Road @ Cumberland Parkway**	Signalized	**F (84.2 s)**	**F (83.7 s)**	**E (64.8 s)**	**E (75.5 s)**
	Eastbound Approach		*F (93.7 s)*	*D (54.6 s)*	E (56.5 s)	D (54.8 s)
	Westbound Approach		*E (68.7 s)*	*F(134.8 s)*	E (72.7 s)	F (85.1 s)
	Northbound Approach		*E (74.5 s)*	*D (51.4 s)*	E (73.1 s)	E (71.2 s)
	Southbound Approach		*E (73.6 s)*	*F (106.8 s)*	E (77.1 s)	F (91.8 s)
2	**Paces Walk @ Cumberland Parkway**	Unsignalized	**n/a***	**n/a***	**n/a***	**n/a***
	Eastbound Approach *(Brookdale Senior Living)*		*F (97.2 s)*	*C (21.8 s)*	*F (74.5 s)*	*C (21.7 s)*
	Westbound Approach *(Paces Walk)*		*F (68.8 s)*	*C (15.7 s)*	*E (37.3 s)*	*B (14.2 s)*
	Northeast-bound Approach *(Cumberland Pkwy)*		*n/a*	*n/a*	*n/a*	*n/a*
	Southwest-bound Approach *(Cumberland Pkwy)*		*n/a*	*n/a*	*n/a*	*n/a*
3	**Paces Ferry Road @ Cumberland Parkway**	Signalized	**F (168.5 s)**	**F (153.3 s)**	**D (50.2 s)**	**D (49.6 s)**
	Eastbound Approach		*D (36.1 s)*	*D (46.0 s)*	*D (48.7 s)*	*D (51.7 s)*
	Westbound Approach		*D (35.8 s)*	*D (36.0 s)*	*D (50.5 s)*	*D (47.1 s)*
	Northbound Approach		*F (357.4 s)*	*F (102.5 s)*	*D (53.3 s)*	*D (51.2 s)*
	Southbound Approach		*D (46.5 s)*	*F (406.7 s)*	*D (42.3 s)*	*D (49.5 s)*
4	**I-285 Northbound Ramps @ Paces Ferry Road**	Signalized	**C (28.7 s)**	**D (38.8 s)**	**C (28.7 s)**	**D (38.8 s)**
	Eastbound Approach		*C (23.0 s)*	*D (41.4 s)*	*C (23.0 s)*	*D (41.4 s)*
	Westbound Approach		*C (21.9 s)*	*C (27.9 s)*	*C (21.9 s)*	*C (27.9 s)*
	Northbound Approach		*E (65.1 s)*	*E (61.4 s)*	*E (65.1 s)*	*E (61.4 s)*
5	**I-285 Southbound Ramps @ Paces Ferry Road**	Signalized	**F (243.7 s)**	**E (58.6 s)**	**D (48.2 s)**	**D (36.8 s)**
	Eastbound Approach		*C (14.8 s)*	*C (22.9 s)*	D (51.0 s)	D (33.9 s)
	Westbound Approach		*C (20.4 s)*	*C (23.9 s)*	D (49.9 s)	C (29.3 s)
	Southbound Approach		*F (585.4 s)*	*F (180.3 s)*	D (44.3 s)	D (53.6 s)
6	**Cumberland Boulevard @ Cumberland Parkway**	Signalized	**D (38.3 s)**	**E (65.5 s)**	**D (38.3 s)**	**E (65.5 s)**
	Northbound Approach		*C (24.2 s)*	*D (53.4 s)*	*C (24.2 s)*	*D (53.4 s)*
	Southbound Approach		*E (70.3 s)*	*E (71.1 s)*	*E (70.3 s)*	*E (71.1 s)*
	Southeast-bound Approach		*E (59.6 s)*	*F (92.3 s)*	*E (59.6 s)*	*F (92.3 s)*
	Northwest-bound Approach		*D (51.6 s)*	*E (57.8 s)*	*D (51.6 s)*	*E (57.8 s)*

* For unsignalized intersections' with stop control only on the minor street, LOS are only reported for the side street approaches.

Under the 2019 "No Build" conditions, multiple intersections in the study network would be operating below the acceptable Level of Service standards during the morning and afternoon peak hours. With the implementation of the recommended System Improvements, all of the intersections were able to achieve the standard LOS D or LOS E where existing conditions were at present LOS E.

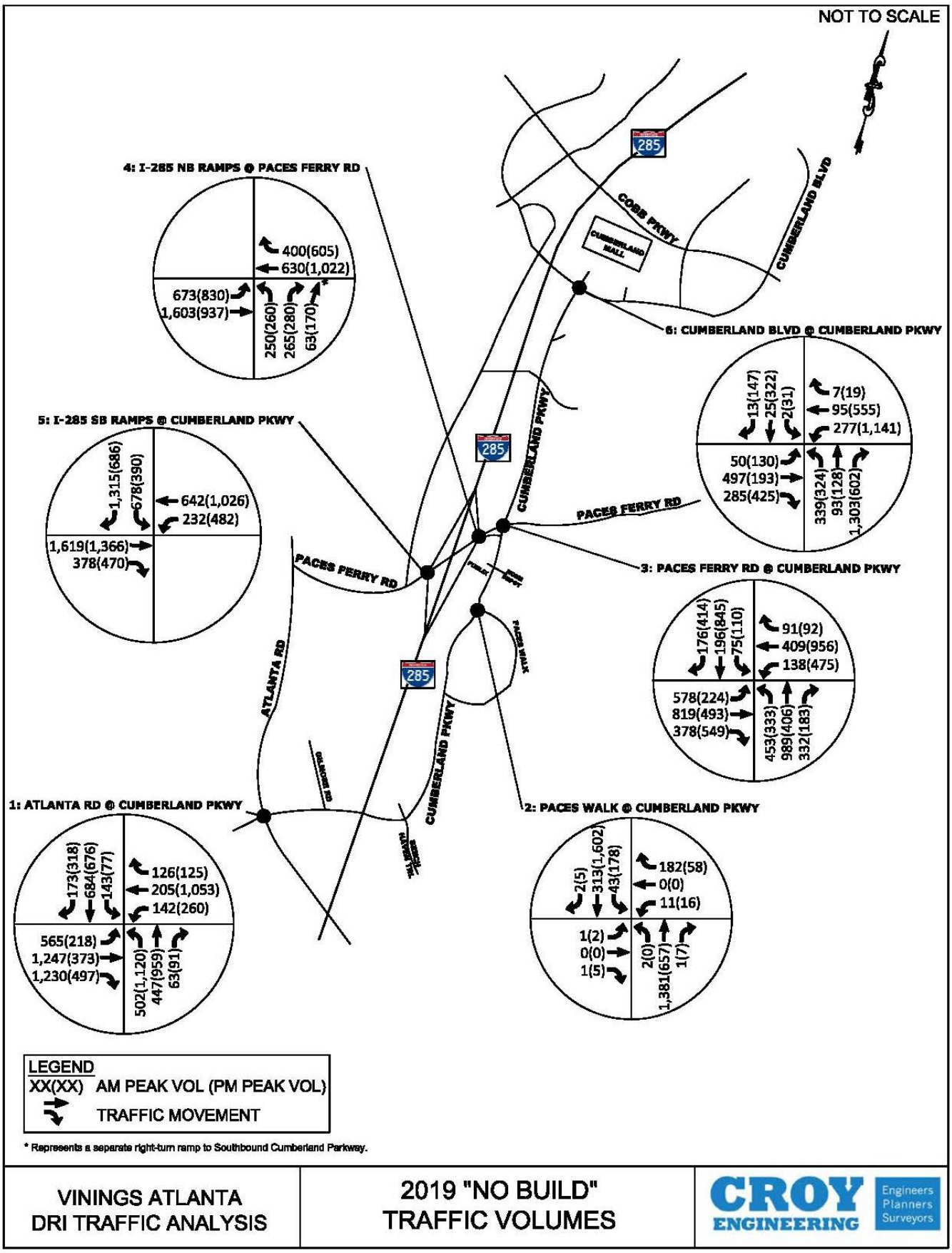


Figure 10: 2019 "No Build" Traffic Volumes

3.6. Site Access Configuration

The following access configuration was utilized when modeling the proposed site driveway intersections and are recommended for the site's construction plans.

Cumberland Parkway at Vinings Atlanta Driveway #1 (Proposed Signal - Full access)

- The driveway will consist of two exiting lanes (separate right-turn and left-turn lanes) and two entering lanes
- A traffic signal is recommended at this intersection. A Traffic Signal Warrant Analysis was completed by Croy Engineering proving that a signal is warranted at this intersection, and the Signal Warrant Report has been submitted to Cobb County's Department of Transportation for review.
- An existing northbound right deceleration lane on Cumberland Parkway leading directly to the development's Driveway #1 will be used for entering right turn movements. The right turn decel lane was constructed as a part of a previous agreement between Cobb County and a former developer who did not complete the development of the parcel.
- Southbound left-turns will be made used an existing centered two-way left-turn lane on Cumberland Parkway.

Cumberland Parkway at Vinings Atlanta Driveway #2 (Unsignalized – Right-In/Right-Out)

- The driveway will consist of a single right-in/right-out exiting lane and a single exiting lane.

Paces Walk at Vinings Atlanta Driveway #3 (Unsignalized - Full access)

- The driveway will consist of a single shared left-turn/right-turn exiting lane and a single exiting lane.

3.7. 2019 "Build" Traffic Analysis

The "Build" conditions associated with the Vinings Atlanta development combined the background traffic from the "No Build" conditions (Figure 10) and the generated trips from Vinings Atlanta (Figure 7). The "Build" traffic volumes are shown in Figure 11. A traffic operation analysis was completed for 2019 "Build" conditions at the study networks intersections and site driveways; the results of the analysis are shown in Table 7. Synchro output tables are in Appendix D.

3.8. Site Mitigation Improvements Analysis

Improvements that are identified as "Site Mitigation Improvements" address deficiencies that are caused by site traffic and can be identified as related to the proposed development. As with the System Improvements recommendations, signal timing splits optimization at high volume intersections are also recommended and were applied to the "Build" condition traffic operations analysis. Based on the 2019 "Build" traffic operations, no additional Site Mitigations improvements are recommended. Figure 12 shows the build scenario traffic control and lane geometry under the future build out conditions.

Table 7: 2019 "Build" Traffic Operations at Study Intersections

	Intersection	Traffic Control	AM	PM
1	**Atlanta Road @ Cumberland Parkway**	Signalized	**E (72.6 s)**	**E (78.0 s)**
	Eastbound Approach		E (62.6 s)	E (57.6 s)
	Westbound Approach		E (74.1 s)	F (85.7 s)
	Northbound Approach		F (79.2 s)	E (75.4 s)
	Southbound Approach		F (93.6 s)	F (92.6 s)
2	**Paces Walk @ Cumberland Parkway**	Unsignalized	**n/a***	**n/a***
	Eastbound Approach *(Brookdale Senior Living)*		C (17.2 s)	E (39.0 s)
	Westbound Approach *(Paces Walk)*		C (15.7 s)	B (13.3 s)
	Northeast-bound Approach *(Cumberland Pkwy)*		n/a	n/a
	Southwest-bound Approach *(Cumberland Pkwy)*		n/a	n/a
3	**Paces Ferry Road @ Cumberland Parkway**	Signalized	**D (53.2 s)**	**E (59.0 s)**
	Eastbound Approach		D (46.7 s)	E (60.3 s)
	Westbound Approach		D (51.0 s)	E (55.6 s)
	Northbound Approach		E (60.0 s)	D (57.5 s)
	Southbound Approach		D (51.8 s)	E (62.5 s)
4	**I-285 Northbound Ramps @ Paces Ferry Road**	Signalized	**C (27.7 s)**	**D (37.9 s)**
	Eastbound Approach		C (22.0 s)	D (38.5 s)
	Westbound Approach		C (22.4 s)	C (29.2 s)
	Northbound Approach		E (65.1 s)	E (62.6 s)
5	**I-285 Southbound Ramps @ Paces Ferry Road**	Signalized	**D (47.3 s)**	**D (37.2 s)**
	Eastbound Approach		D (51.0 s)	C (34.2 s)
	Westbound Approach		D (49.9 s)	C (29.4 s)
	Southbound Approach		D (42.8 s)	D (52.3 s)
6	**Cumberland Boulevard @ Cumberland Parkway**	Signalized	**D (39.0 s)**	**E (75.3 s)**
	Northbound Approach		C (24.8 s)	E (58.7 s)
	Southbound Approach		E (70.3 s)	E (71.1 s)
	Southeast-bound Approach		E (59.5 s)	F (105.7 s)
	Northwest-bound Approach		D (53.0 s)	E (71.4 s)
7	**Vinings Atlanta Driveway #1 @ Cumberland Parkway**	Signalized	**C (25.2 s)**	**B (12.9 s)**
	Westbound Approach		D (43.5 s)	C (27.4 s)
	Northbound Approach		C (22.5 s)	B (13.3 s)
	Southbound Approach		B (19.9 s)	B (9.0 s)
8	**Vinings Atlanta Driveway #2 @ Cumberland Parkway**	Unsignalized	**n/a***	**n/a***
	Westbound Approach		C (17.2 s)	B (11.7 s)
	Northbound Approach		n/a	n/a
	Southbound Approach		n/a	n/a
9	**Vinings Atlanta Driveway #3 @ Paces Walk**	Unsignalized	**n/a***	**n/a***
	Southeast-bound Approach		n/a	n/a
	Northwest-bound Approach		n/a	n/a
	Northeast-bound Approach		B (10.1 s)	B (10.2 s)

* For unsignalized intersections' with stop control only on the minor street, LOS are only reported for the side street approaches.

Under the 2019 "Build" conditions, all of the study network intersections and Vinings Atlanta's driveways would be operating at or above the standard Levels of Service.

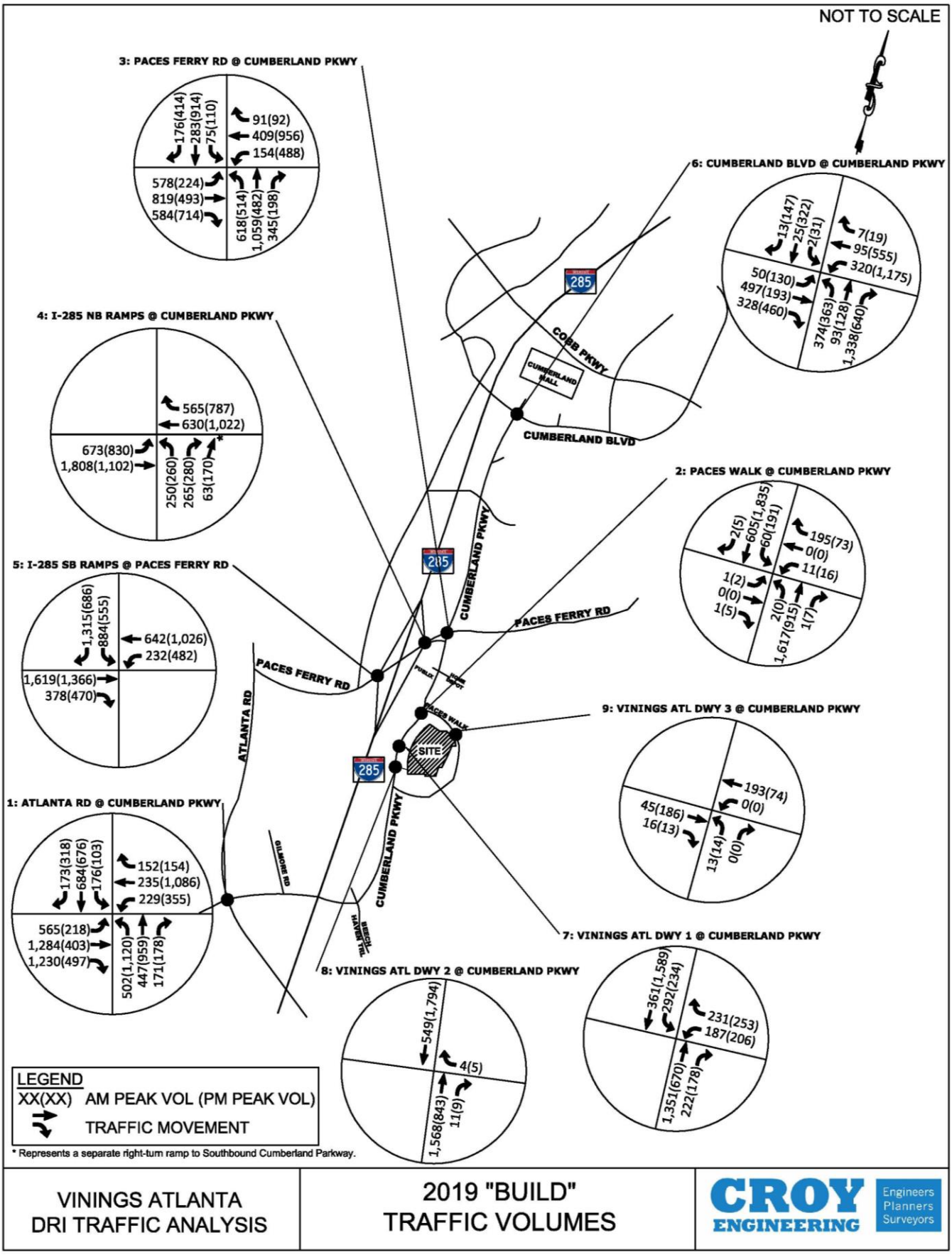


Figure 11: 2019 "Build" Traffic Volumes

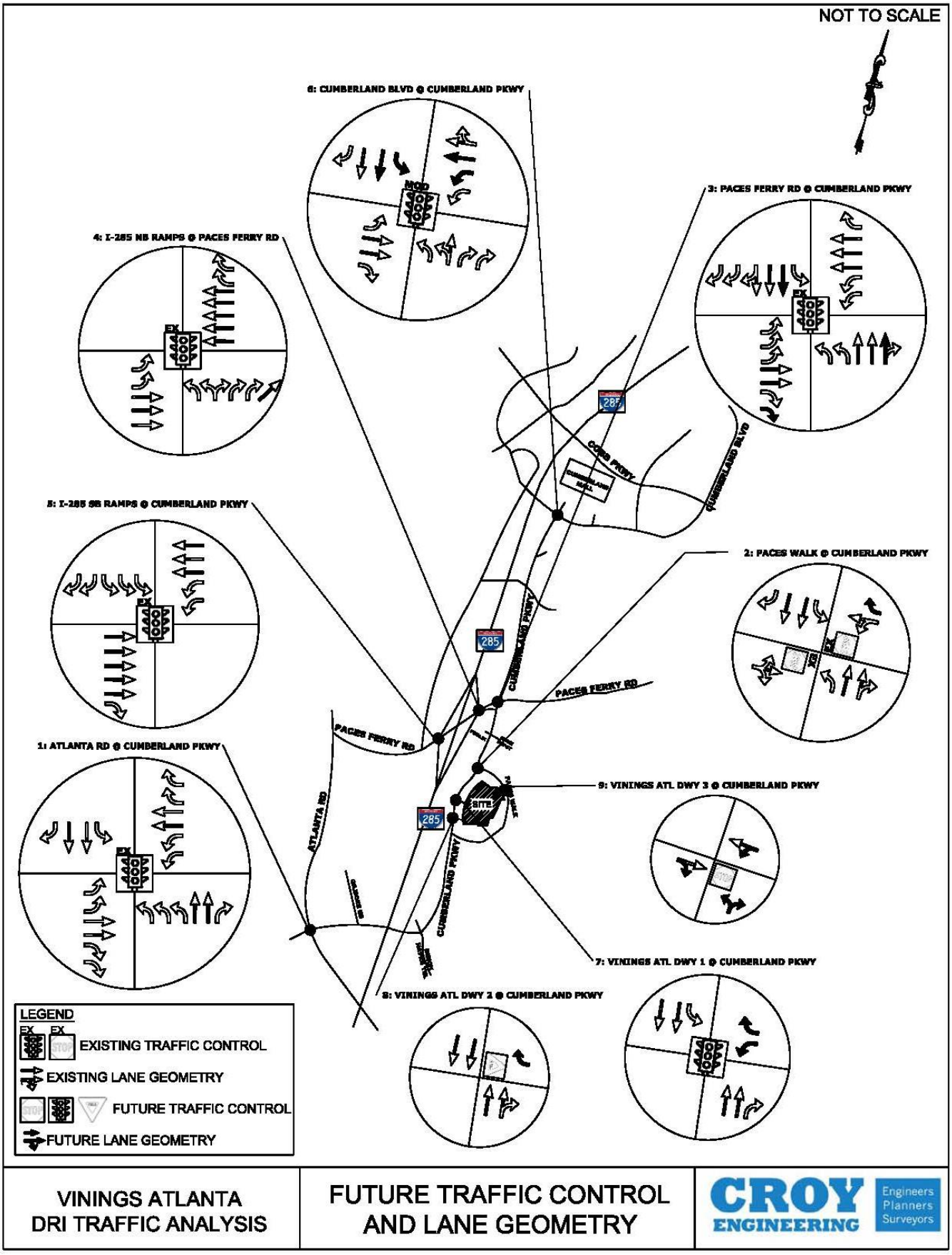


Figure 12: Future Lane Geometry and Traffic Control at Study Intersections

4. RECOMMENDATIONS AND CONCLUSION

Traffic impacts were evaluated for the added traffic from the proposed Vinings Atlanta mixed-use development located on Cumberland Parkway north of Atlanta Road and south of Cumberland Boulevard. The proposed development will consist of:

- 300 Apartment units
- 50 Condominiums
- 225 attached Senior Living housing units
- 200 Assisted Living units
- 300 room Hotel
- 100,000 square feet of Office Space
- 23,100 square feet of Retail
- 78,000 square feet Supermarket

Improvements that are identified as "System Improvements" address deficiencies that are found in the study network for the "No Build" conditions without the addition of traffic from the proposed development. The following System Improvements are recommended within the study network to address below standard Levels of Service and delay:

- *Intersection Improvements at Paces Ferry Road and Cumberland Parkway*
  - Make northbound right turn lane a shared through/right lane, and extend the lane back an additional 350 feet.
  - Extend outermost northbound lane north of Paces Ferry to 2500 Cumberland Parkway parking decks' driveway.
  - Remove southbound raised median, and add an additional southbound through lane.
  - Set eastbound right turn island back to accommodate third southbound through lane, and extend the lane down to Publix/Home Depot's signalized driveway and terminate the lane as a right-turn only lane into Publix's Driveway.
  - Add additional eastbound right turn lane and extend dual right turn lanes 250 feet.
  - Extend innermost westbound left turn lane back 400 feet

- *Add a westbound right-turn bay at Paces Walk and Cumberland Parkway.*

- *Optimize signal timing splits at high volume intersections while holding cycle lengths constant to reflect the coordinated nature of the signals through the corridors.*

Improvements that are identified as "Site Mitigation Improvements" address deficiencies that are caused by site traffic and can be identified as related to the proposed development. Based on the 2019 "Build" traffic operations results, there are no Site Mitigation recommendations.

5. Other Pertinent Information

Note that the Vinings Atlanta DRI #2620 is on the same site as a formerly reviewed DRI #1439, The Village at Vinings with a GRTA Notice of Decision issued on August 22, 2007 for approval with conditions. When a decision is issued for DRI 2620 Vinings Atlanta, it will replace the former one.

Appendix A

TRIP GENERATION AND REDUCTION TABLES

"Vinings Atlanta"

ITE GENERATED TRIPS CALCULATIONS

Trip Generation Summary (GROSS)

Description	LUC	Unit	Quantity	Daily	AM Peak			PM Peak		
				Two-way	Enter	Exit	Total	Enter	Exit	Total
Apartments	220	Dwelling Units	300	1,942	30	121	151	119	64	183
Condominiums	230	Dwelling Units	50	352	5	25	30	23	11	34
Senior Housing (Attached)	252	Dwelling Units	225	692	15	30	45	30	26	56
Assisted Living	254	Beds/Units	200	419	18	10	28	19	25	44
Hotel	310	Rooms	300	2,312	94	65	159	92	88	180
Office	710	SQ FT/1000	100	1,313	168	23	191	32	158	190
Specialty Retail	826	SQ FT/1000	23.1	1,026	110	119	229	65	51	116
Supermarket	850	SQ FT/1000	78	6,614	164	101	265	331	318	648
Total				**14,668**	**605**	**493**	**1,098**	**711**	**740**	**1,451**

Trip Generation Summary (NET)

Description	LUC	Unit	Quantity	Daily	AM Peak			PM Peak		
				Two-way	Enter	Exit	Total	Enter	Exit	Total
Apartments	220	Dwelling Units	300	1,942	30	121	151	119	64	183
Condominiums	230	Dwelling Units	50	352	5	25	30	23	11	34
Senior Housing (Attached)	252	Dwelling Units	225	692	15	30	45	30	26	56
Assisted Living	254	Beds/Units	200	419	18	10	28	19	25	44
Hotel	310	Rooms	300	2,312	94	65	159	92	88	180
Office	710	SQ FT/1000	100	1,313	168	23	191	32	158	190
Specialty Retail	826	SQ FT/1000	23.1	1,026	110	119	229	65	51	116
Supermarket	850	SQ FT/1000	78	6,614	164	101	265	331	318	648
Total without Reductions				**14,670**	**604**	**494**	**1,098**	**711**	**741**	**1,451**
Mixed-Use Reduction - incl. 5% Transit (Residential)				*-237*	*-4*	*-15*	*-19*	*-91*	*-46*	*-137*
Mixed-Use Reduction - incl. 5% Transit (Hotel)				*-280*	*-5*	*-17*	*-22*	*-20*	*-8*	*-28*
Mixed-Use Reduction - incl. 5% Transit (Office)				*-304*	*-24*	*-7*	*-31*	*-12*	*-33*	*-45*
Mixed-Use Reductions - incl. 5% Transit (Retail+Supermarket)				*-775*	*-30*	*-19*	*-49*	*-75*	*-111*	*-186*
Retail Pass-by Trips (0%)34%				*-170*	*0*	*0*	*0*	*-8*	*-2*	*-10*
Supermarket Pass-by Trips (0%)36%				*-1,550*	*0*	*0*	*0*	*-72*	*-63*	*-135*
Total with Reductions				**11,354**	**541**	**436**	**977**	**433**	**478**	**910**

Assumptions:

1. 70% of daily retail & supermarket trips are made in the PM.

2. 60% of mixed-used reductions for retail are oriented towards the supermarket.

ITE TRIP GENERATION WORKSHEETS

Apartment LUC 220

Average Vehicle Trip Ends vs: Dwelling Units	Formula	Number	Total		Enter	Exit
Ona :					50%	50%
Per Weekday	T=6.06(X) + 123.56	300	1,942		971	971
					20%	80%
Morning Peak Hour of Adjacent Street Traffic One Hour Between 7 & 9 a.m.	T=0.49(X) + 3.73	300	151		30	121
					65%	35%
Afternoon Peak Hour of Adjacent Street Traffic One Hour Between 4 & 6 p.m.	T=0.55(X) + 17.65	300	183		119	64

Residential Condominium/Townhouse LUC 230

Average Vehicle Trip Ends vs: Dwelling Units	Formula	Number	Total		Enter	Exit
On a :					50%	50%
Per Weekday	Ln(T)=.87Ln(X)+2.46	50	352		176	176
					17%	83%
Morning Peak Hour of Adjacent Street Traffic One Hour Between 7 & 9 a.m.	Ln(T)=.80Ln(X)+0.26	50	30		5	25
					67%	33%
Afternoon Peak Hour of Adjacent Street Traffic One Hour Between 4 & 6 p.m.	Ln(T)=0.82Ln(X)+0.32	50	34		23	11

Senior Adult Housing - Attached LUC 252

Average Vehicle Trip Ends vs: Dwelling Units	Formula	Number	Total		Enter	Exit
On a :					50%	50%
Per Weekday	T=2.98(X) + 21.05	225	692		346	346
					34%	66%
Morning Peak Hour of Adjacent Street Traffic One Hour Between 7 & 9 a.m.	T=0.20(X) -.13	225	45		15	30
					54%	46%
Afternoon Peak Hour of Adjacent Street Traffic One Hour Between 4 & 6 p.m.	T=0.24(X) + 1.64	225	56		30	26

Assisted Living LUC 254

Average Vehicle Trip Ends vs: Dwelling Units	Formula	Number	Total		Enter	Exit
On a :					50%	50%
Per Weekday	Ln(T)=.56 Ln(X)+3.07	200	419		209	209
	Average =				65%	35%
Morning Peak Hour of Adjacent Street Traffic One Hour Between 7 & 9 a.m.	0.14	200	28		18	10
	Average =				44%	56%
Afternoon Peak Hour of Adjacent Street Traffic One Hour Between 4 & 6 p.m.	0.22	200	44		19	25

ITE TRIP GENERATION WORKSHEETS

Hotel LUC 310

Average Vehicle Trip Ends vs: Rooms	Formula	Number	Total		Enter	Exit
					50%	50%
Per Weekday	T=8.95(x) - 373.16	300	2312		1156	1156
	Average =				59%	41%
Peak Hour of Adjacent Street Traffic One Hour Between 7 & 9 a.m.	0.53	300	159		94	65
	Average =				51%	49%
Peak Hour of Adjacent Street Traffic One Hour Between 4 & 6 p.m.	0.60	300	180		92	88

General Office Building LUC 710

Average Vehicle Trip Ends vs: 1000 sq Feet Gross floor Area	Formula	Number	Total		Enter	Exit
On a :					50%	50%
Per Weekday	Ln(T)=.76Ln(X)+3.68	100	1,313		656	656

Average Vehicle Trip Ends vs: 1000 sq Feet Gross floor Area	Formula	Number	Total		Enter	Exit
					88%	12%
A.M. Peak Hour	Ln(T)=.80Ln(X)+1.57	100	191		168	23
					17%	83%
P.M. Peak Hour	T=1.12(X)+78.45	100	190		32	158

Specialty Retail Center LUC 826

Average Vehicle Trip Ends vs: 1000 sq Feet Gross floor Area	Formula	Number	Total		Enter	Exit
					50%	50%
Weekday	T=42.78(X)+37.66	23.103	1026.01		513	513

Average Vehicle Trip Ends vs: 1000 sq Feet Gross floor Area	Formula	Number	Total		Enter	Exit
					48%	52%
A.M. Peak Hour of Generator	T=4.91(X)+115.59	23.103	229.03		110	119
	Average =				56%	44%
P.M. Peak Hour of Generator	5.02	23.103	115.98		65	51

Supermarket LUC 850

Average Vehicle Trip Ends vs: 1000 sq Feet Gross floor Area	Formula	Number	Total		Enter	Exit
					50%	50%
Weekday	T=66.95(X)+1391.56	78	6614		3307	3307
	Average =				62%	38%
Peak Hour of Adjacent Street Traffic One Hour Between 7 & 9 a.m.	3.40	78	265		164	101
					51%	49%
Peak Hour of Adjacent Street Traffic One Hour Between 4 & 6 p.m.	Ln(T)=.74ln(X)+3.25	78	648		331	318

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Kaplan Cumberland Pkwy Site Development	**Organization:**	Kaplan Morgan Vinings Developments, LLC
Project Location:	Cumberland Pkwy S of Paces Walk	**Performed By:**	AT, Croy Engineering
Scenario Description:	Mixed-Use Development	**Date:**	8/22/2016
Analysis Year:	2016	**Checked By:**	DBD, Croy Engineering
Analysis Period:	**Daily**	**Date:**	8/22/2016

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	100	SQFT/1000	1,313	657	657
Retail	826/850	101	SQFT/1000	7,640	3,820	3,820
Restaurant						
Cinema/Entertainment						
Residential	20/230/252/25	775	Dwelling Units	3,405	1,703	1,703
Hotel	310	300	Rooms	2,312	1,156	1,156
All Other Land Uses[2]						
				14,670	7,335	7,335

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	5%		1.00	5%	
Retail	1.00	5%		1.00	5%	
Restaurant						
Cinema/Entertainment						
Residential	1.00	5%		1.00	5%	
Hotel	1.00	5%		1.00	5%	
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		184	0	0	0	0
Retail	26		0	0	34	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	20	17	0	0		0
Hotel	20	153	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	14,672	7,336	7,336
Internal Capture Percentage	6%	6%	6%
External Vehicle-Trips[5]	13,076	6,538	6,538
External Transit-Trips[6]	688	344	344
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	10%	28%
Retail	9%	2%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	2%
Hotel	0%	15%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Kaplan Cumberland Pkwy Site Development
Analysis Period:	**Daily**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	656.5	657	1.00	656.5	657
Retail	1.00	3820	3820	1.00	3820	3820
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	1702.5	1703	1.00	1702.5	1703
Hotel	1.00	1156	1156	1.00	1156	1156

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		184	414	0	7	0
Retail	1108		497	0	535	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	34	17	341	0		0
Hotel	867	162	104	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1222	0	0	0	0
Retail	26		0	0	34	0
Restaurant	92	306		0	85	46
Cinema/Entertainment	0	0	0		0	0
Residential	20	649	0	0		0
Hotel	20	153	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	66	591	657	561	30	0
Retail	354	3466	3820	3293	173	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	34	1669	1703	1586	83	0
Hotel	0	1156	1156	1098	58	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	184	473	657	449	24	0
Retail	60	3760	3820	3572	188	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	37	1666	1703	1583	83	0
Hotel	173	983	1156	934	49	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Kaplan Cumberland Pkwy Site Development	**Organization:**	Kaplan Morgan Vinings Developments, LLC
Project Location:	Cumberland Pkwy S of Paces Walk	**Performed By:**	AT, Croy Engineering
Scenario Description:	Mixed-Use Development	**Date:**	8/22/2016
Analysis Year:	2016	**Checked By:**	DBD, Croy Engineering
Analysis Period:	**AM Street Peak Hour**	**Date:**	8/22/2016

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	100	SQFT/1000	191	168	23
Retail	826/850	101	SQFT/1000	494	274	220
Restaurant				0		
Cinema/Entertainment				0		
Residential	20/230/252/25	775	Dwelling Units	254	68	186
Hotel	310	300	Rooms	159	94	65
All Other Land Uses[2]				0		
				1,098	604	494

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	5%		1.00	5%	
Retail	1.00	5%		1.00	5%	
Restaurant						
Cinema/Entertainment						
Residential	1.00	5%		1.00	5%	
Hotel	1.00	5%		1.00	5%	
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		6	0	0	0	0
Retail	7		0	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	4	2	0	0		0
Hotel	5	9	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,098	604	494
Internal Capture Percentage	6%	6%	7%
External Vehicle-Trips[5]	977	541	436
External Transit-Trips[6]	53	29	24
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	10%	26%
Retail	6%	4%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	1%	3%
Hotel	0%	22%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Kaplan Cumberland Pkwy Site Development
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	168	168	1.00	23	23
Retail	1.00	274	274	1.00	220	220
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	68	68	1.00	186	186
Hotel	1.00	94	94	1.00	65	65

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		6	14	0	0	0
Retail	64		29	0	31	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	4	2	37	0		0
Hotel	49	9	6	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		88	0	0	0	0
Retail	7		0	0	1	0
Restaurant	24	22		0	3	4
Cinema/Entertainment	0	0	0		0	0
Residential	5	47	0	0		0
Hotel	5	11	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	16	152	168	144	8	0
Retail	17	257	274	244	13	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	67	68	64	3	0
Hotel	0	94	94	89	5	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	6	17	23	16	1	0
Retail	8	212	220	201	11	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	6	180	186	171	9	0
Hotel	14	51	65	48	3	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Kaplan Cumberland Pkwy Site Development	**Organization:**	Kaplan Morgan Vinings Developments, LLC
Project Location:	Cumberland Pkwy S of Paces Walk	**Performed By:**	AT, Croy Engineering
Scenario Description:	Mixed-Use Development	**Date:**	8/22/2016
Analysis Year:	2016	**Checked By:**	DBD, Croy Engineering
Analysis Period:	**PM Street Peak Hour**	**Date:**	8/22/2016

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	100	SQFT/1000	190	32	158
Retail	826/850	101	SQFT/1000	765	396	369
Restaurant				0		
Cinema/Entertainment				0		
Residential	20/230/252/25	775	Dwelling Units	317	191	126
Hotel	310	300	Rooms	180	92	88
All Other Land Uses[2]				0		
				1,452	711	741

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	5%		1.00	5%	
Retail	1.00	5%		1.00	5%	
Restaurant						
Cinema/Entertainment						
Residential	1.00	5%		1.00	5%	
Hotel	1.00	5%		1.00	5%	
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		350			575	
Retail					450	
Restaurant						
Cinema/Entertainment						
Residential		450				
Hotel					500	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	0	0	3	0
Retail	7		0	0	88	16
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	37	0	0		4
Hotel	0	8	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,452	711	741
Internal Capture Percentage	27%	28%	27%
External Vehicle-Trips[5]	1,003	487	516
External Transit-Trips[6]	53	26	27
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	38%	21%
Retail	19%	30%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	48%	37%
Hotel	22%	9%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Kaplan Cumberland Pkwy Site Development
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	32	32	1.00	158	158
Retail	1.00	396	396	1.00	369	369
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	191	191	1.00	126	126
Hotel	1.00	92	92	1.00	88	88

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	6	0	3	0
Retail	7		107	15	96	18
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	49	26	0		4
Hotel	0	14	60	0	2	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	0	0	8	0
Retail	10		0	0	88	16
Restaurant	10	198		0	31	65
Cinema/Entertainment	2	16	0		8	1
Residential	18	37	0	0		11
Hotel	0	8	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	12	20	32	19	1	0
Retail	75	321	396	305	16	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	91	100	191	95	5	0
Hotel	20	72	92	68	4	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	33	125	158	119	6	0
Retail	111	258	369	245	13	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	46	80	126	76	4	0
Hotel	8	80	88	76	4	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table F.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
921	Albany, NY	July & Aug. 1985	196	4:00–6:00 p.m.	23	42	35	77	—	60,950	Raymond Keyes Assoc.
108	Overland Park, KS	July 1988	111	4:30–5:30 p.m.	26	61	13	74	—	34,000	—
118	Overland Park, KS	Aug. 1988	123	4:30–5:30 p.m.	25	55	20	75	—	—	—
256	Greece, NY	June 1988	120	4:00–6:00 p.m.	38	62	—	62	—	23,410	Sear Brown
160	Greece, NY	June 1988	78	4:00–6:00 p.m.	29	71	—	71	—	57,306	Sear Brown
550	Greece, NY	June 1988	117	4:00–6:00 p.m.	48	52	—	52	—	40,763	Sear Brown
51	Boca Raton, FL	Dec. 1987	110	4:00–6:00 p.m.	33	34	33	67	—	42,225	Kimley-Horn and Assoc. Inc.
1,090	Ross Twp, PA	July 1988	411	2:00–8:00 p.m.	34	56	10	66	—	51,500	Wilbur Smith and Assoc.
97	Upper Dublin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	41	—	—	59	—	34,000	McMahon Associates
118	Tredyffrin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	24	—	—	76	—	10,000	Booz Allen & Hamilton
122	Lawnside, NJ	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	20,000	Pennoni Associates
126	Boca Raton, FL	Winter 1988/89	—	4:00–6:00 p.m.	43	—	—	57	—	40,000	McMahon Associates
150	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	39	—	—	61	—	26,000	Booz Allen & Hamilton
153	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	50	—	—	50	—	85,000	McMahon Associates
153	Arden, DE	Winter 1988/89	—	4:00–6:00 p.m.	30	—	—	70	—	26,000	Orth-Rodgers & Assoc. Inc.
154	Doylestown, PA	Winter 1988/89	—	4:00–6:00 p.m.	32	—	—	68	—	29,000	Orth-Rodgers & Assoc. Inc.
164	Middletown Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	25,000	Booz Allen & Hamilton
166	Haddon Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	20	—	—	80	—	6,000	Pennoni Associates
205	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	55	—	—	45	—	62,000	McMahon Associates

Table F.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
237	W. Windsor Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	48	—	—	52	—	46,000	Booz Allen & Hamilton
242	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	26,000	McMahon Associates
297	Whitehall, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	26,000	Orth-Rodgers & Assoc. Inc.
360	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	44	—	—	56	—	73,000	McMahon Associates
370	Pittsburgh, PA	Winter 1988/89	—	4:00–6:00 p.m.	19	—	—	81	—	33,000	Wilbur Smith
150	Portland, OR	—	519	4:00–6:00 p.m.	68	6	26	32	—	25,000	Kittelson and Associates
150	Portland, OR	—	655	4:00–6:00 p.m.	65	7	28	35	—	30,000	Kittelson and Associates
760	Calgary, Alberta	Oct.-Dec. 1987	15,436	4:00–6:00 p.m.	20	39	41	80	—	—	City of Calgary DOT
178	Bordentown, NJ	Apr. 1989	154	2:00–6:00 p.m.	35	—	—	65	—	37,980	Raymond Keyes Assoc.
144	Manalapan, NJ	July 1990	176	3:30–6:15 p.m.	32	44	24	68	—	69,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	4:45–5:45 p.m.	33	26	41	67	—	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 34

"—" means no data were provided

Table F.13 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 850—Supermarket

SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			AVERAGE DAILY TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL		
30	Overland Park, KS	1987	40	4:30–5:30 p.m.	32	48	20	68	—	—
<25	Chicago suburbs, IL	1987	155	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
<25	Chicago suburbs, IL	1987	191	3:00–6:00 p.m.	57	—	—	43	—	Kenig, O'Hara, Humes, Flock
<25	Chicago suburbs, IL	1987	113	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
34	Omaha, NE	—	—	4:00–6:00 p.m.	44	29	27	56	15,200	University of Nebraska–Lincoln
66	Omaha, NE	—	—	4:00–6:00 p.m.	23	30	47	77	63,000	University of Nebraska–Lincoln
70	Omaha, NE	—	—	4:00–6:00 p.m.	26	30	44	74	34,300	University of Nebraska–Lincoln
31	Omaha, NE	—	—	4:00–6:00 p.m.	19	36	45	81	48,700	University of Nebraska–Lincoln
31	Omaha, NE	—	—	4:00–6:00 p.m.	28	40	32	72	23,500	University of Nebraska–Lincoln
55	Omaha, NE	—	—	4:00–6:00 p.m.	27	35	38	73	27,200	University of Nebraska–Lincoln
65	Omaha, NE	—	—	4:00–6:00 p.m.	25	25	50	75	44,700	University of Nebraska–Lincoln
31	Orlando, FL	1993	440	2:00–6:00 p.m.	35	—	—	65	—	TPD Inc.

Average Pass-By Trip Percentage: 36
"—" means no data were provided

Appendix B

TRAFFIC VOLUME COUNTS

Greater Traffic Company

File Name : cumberland@atlanta
Site Code : 00000001
Start Date : 8/24/2016
Page No : 1

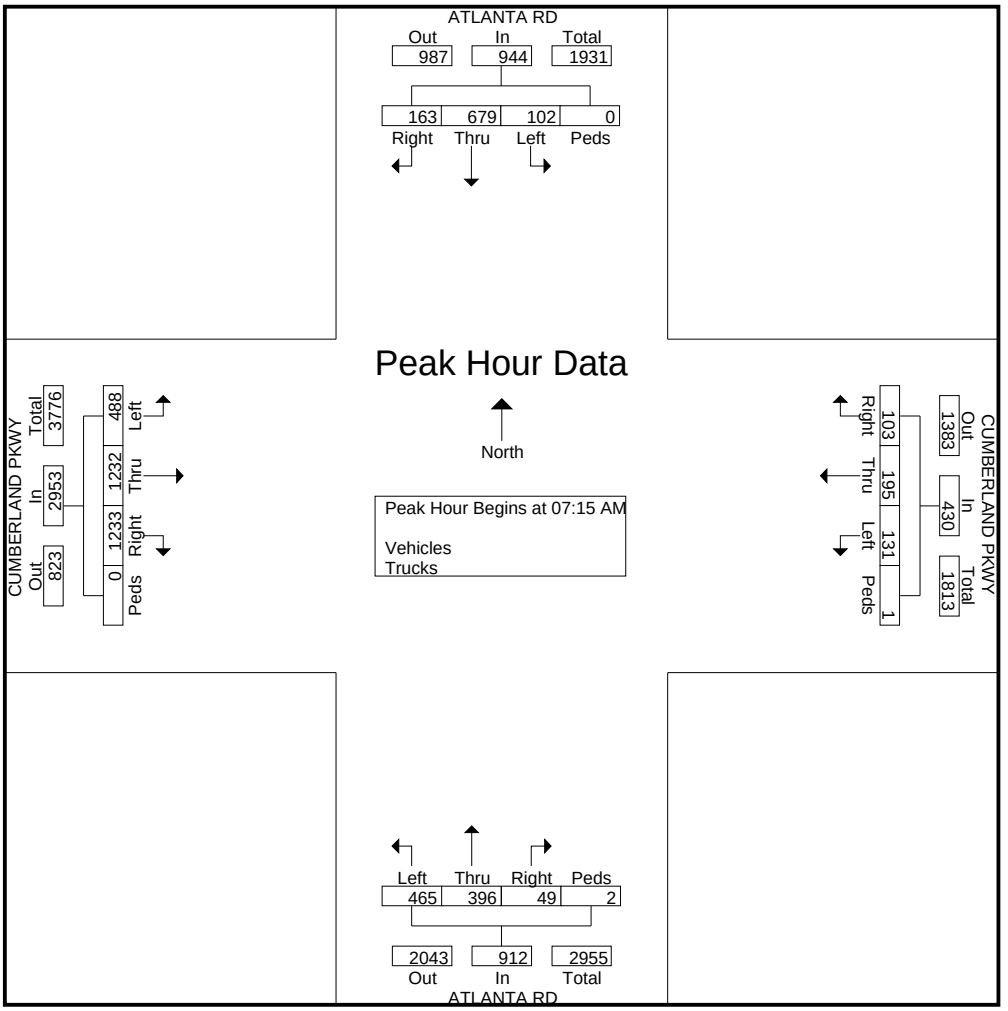
Groups Printed- Vehicles - Trucks

	ATLANTA RD Northbound					ATLANTA RD Southbound					CUMBERLAND PKWY Eastbound					CUMBERLAND PKWY 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	88	52	7	0	147	15	118	33	0	166	70	262	317	0	649	31	46	17	0	94	1056
07:15 AM	107	54	7	0	168	16	164	41	0	221	88	356	317	0	761	26	35	14	1	76	1226
07:30 AM	108	111	14	2	235	27	170	46	0	243	109	277	318	0	704	42	57	24	0	123	1305
07:45 AM	132	108	17	0	257	24	175	46	0	245	146	285	302	0	733	37	53	31	0	121	1356
Total	435	325	45	2	807	82	627	166	0	875	413	1180	1254	0	2847	136	191	86	1	414	4943
08:00 AM	118	123	11	0	252	35	170	30	0	235	145	314	296	0	755	26	50	34	0	110	1352
08:15 AM	116	80	17	1	214	49	130	41	1	221	133	300	244	0	677	29	33	30	0	92	1204
08:30 AM	99	118	15	0	232	31	106	34	1	172	118	319	202	0	639	24	42	29	0	95	1138
08:45 AM	111	79	23	1	214	39	92	37	1	169	144	345	197	0	686	27	61	29	0	117	1186
Total	444	400	66	2	912	154	498	142	3	797	540	1278	939	0	2757	106	186	122	0	414	4880
*** BREAK ***																					
04:00 PM	240	122	13	0	375	14	119	93	1	227	55	92	108	0	255	73	271	22	1	367	1224
04:15 PM	292	182	12	2	488	15	130	82	0	227	61	82	124	0	267	53	243	17	0	313	1295
04:30 PM	242	161	12	0	415	24	175	86	0	285	48	92	129	0	269	67	248	27	0	342	1311
04:45 PM	256	149	14	0	419	19	145	102	0	266	40	92	115	0	247	58	286	33	0	377	1309
Total	1030	614	51	2	1697	72	569	363	1	1005	204	358	476	0	1038	251	1048	99	1	1399	5139
05:00 PM	281	229	25	0	535	22	154	85	0	261	42	92	90	1	225	60	232	31	0	323	1344
05:15 PM	234	217	22	0	473	15	178	77	0	270	56	81	129	0	266	68	267	22	0	357	1366
05:30 PM	263	221	17	0	501	19	157	73	1	250	53	98	133	0	284	62	239	22	1	324	1359
05:45 PM	279	238	22	1	540	17	149	65	0	231	55	81	117	0	253	55	255	43	1	354	1378
Total	1057	905	86	1	2049	73	638	300	1	1012	206	352	469	1	1028	245	993	118	2	1358	5447
06:00 PM	284	241	39	0	564	13	146	77	2	238	51	83	101	0	235	63	202	32	0	297	1334
06:15 PM	273	167	27	1	468	20	149	112	0	281	60	101	129	0	290	56	201	33	1	291	1330
06:30 PM	261	156	30	0	447	23	126	86	1	236	39	88	113	1	241	33	214	27	2	276	1200
06:45 PM	280	131	29	0	440	27	103	81	0	211	25	75	98	0	198	52	182	29	0	263	1112
Total	1098	695	125	1	1919	83	524	356	3	966	175	347	441	1	964	204	799	121	3	1127	4976
Grand Total	4064	2939	373	8	7384	464	2856	1327	8	4655	1538	3515	3579	2	8634	942	3217	546	7	4712	25385
Apprch %	55	39.8	5.1	0.1		10	61.4	28.5	0.2		17.8	40.7	41.5	0		20	68.3	11.6	0.1		
Total %	16	11.6	1.5	0	29.1	1.8	11.3	5.2	0	18.3	6.1	13.8	14.1	0	34	3.7	12.7	2.2	0	18.6	
Vehicles	3991	2888	367	8	7254	463	2824	1300	8	4595	1506	3487	3528	2	8523	937	3197	542	7	4683	25055
% Vehicles	98.2	98.3	98.4	100	98.2	99.8	98.9	98	100	98.7	97.9	99.2	98.6	100	98.7	99.5	99.4	99.3	100	99.4	98.7
Trucks	73	51	6	0	130	1	32	27	0	60	32	28	51	0	111	5	20	4	0	29	330
% Trucks	1.8	1.7	1.6	0	1.8	0.2	1.1	2	0	1.3	2.1	0.8	1.4	0	1.3	0.5	0.6	0.7	0	0.6	1.3

Greater Traffic Company

File Name : cumberland@atlanta
Site Code : 00000001
Start Date : 8/24/2016
Page No : 2

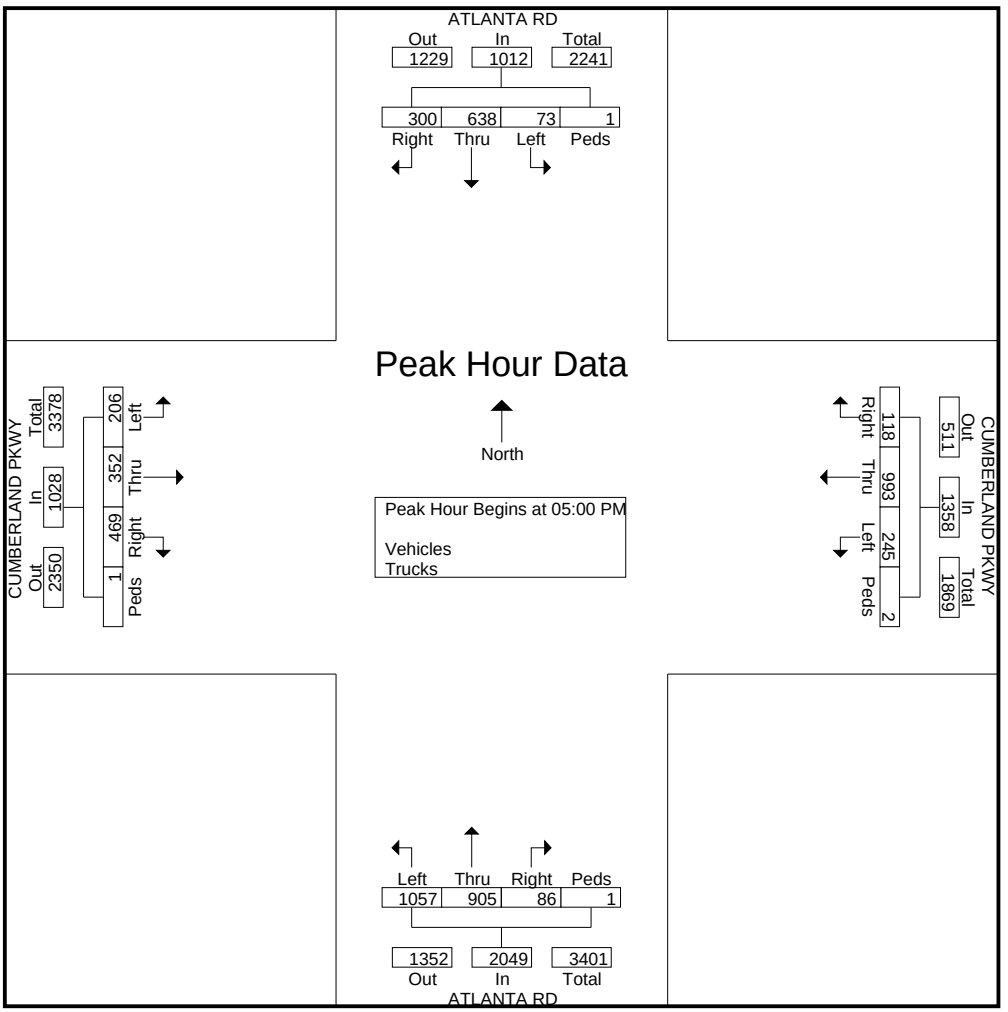
	ATLANTA RD Northbound					ATLANTA RD Southbound					CUMBERLAND PKWY Eastbound					CUMBERLAND PKWY Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	107	54	7	0	168	16	164	41	0	221	88	**356**	317	0	**761**	26	35	14	**1**	76	1226
07:30 AM	108	111	14	**2**	235	27	170	**46**	0	243	109	277	**318**	0	704	**42**	**57**	24	0	**123**	1305
07:45 AM	**132**	108	**17**	0	**257**	24	**175**	46	0	**245**	**146**	285	302	0	733	37	53	31	0	121	**1356**
08:00 AM	118	**123**	11	0	252	**35**	170	30	0	235	145	314	296	0	755	26	50	**34**	0	110	1352
Total Volume	465	396	49	2	912	102	679	163	0	944	488	1232	1233	0	2953	131	195	103	1	430	5239
% App. Total	51	43.4	5.4	0.2		10.8	71.9	17.3	0		16.5	41.7	41.8	0		30.5	45.3	24	0.2		
PHF	.881	.805	.721	.250	.887	.729	.970	.886	.000	.963	.836	.865	.969	.000	.970	.780	.855	.757	.250	.874	.966



Greater Traffic Company

File Name : cumberland@atlanta
Site Code : 00000001
Start Date : 8/24/2016
Page No : 3

	ATLANTA RD Northbound					ATLANTA RD Southbound					CUMBERLAND PKWY Eastbound					CUMBERLAND PKWY 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 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**281**	229	**25**	0	535	**22**	154	**85**	0	261	42	92	90	**1**	225	60	232	31	0	323	1344
05:15 PM	234	217	22	0	473	15	**178**	77	0	**270**	**56**	81	129	0	266	**68**	**267**	22	0	**357**	1366
05:30 PM	263	221	17	0	501	19	157	73	**1**	250	53	**98**	**133**	0	**284**	62	239	22	**1**	324	1359
05:45 PM	279	**238**	22	**1**	**540**	17	149	65	0	231	55	81	117	0	253	55	255	**43**	1	354	**1378**
Total Volume	1057	905	86	1	2049	73	638	300	1	1012	206	352	469	1	1028	245	993	118	2	1358	5447
% App. Total	51.6	44.2	4.2	0		7.2	63	29.6	0.1		20	34.2	45.6	0.1		18	73.1	8.7	0.1		
PHF	.940	.951	.860	.250	.949	.830	.896	.882	.250	.937	.920	.898	.882	.250	.905	.901	.930	.686	.500	.951	.988



Greater Traffic Company

File Name : 02
Site Code : 00000002
Start Date : 8/23/2016
Page No : 1

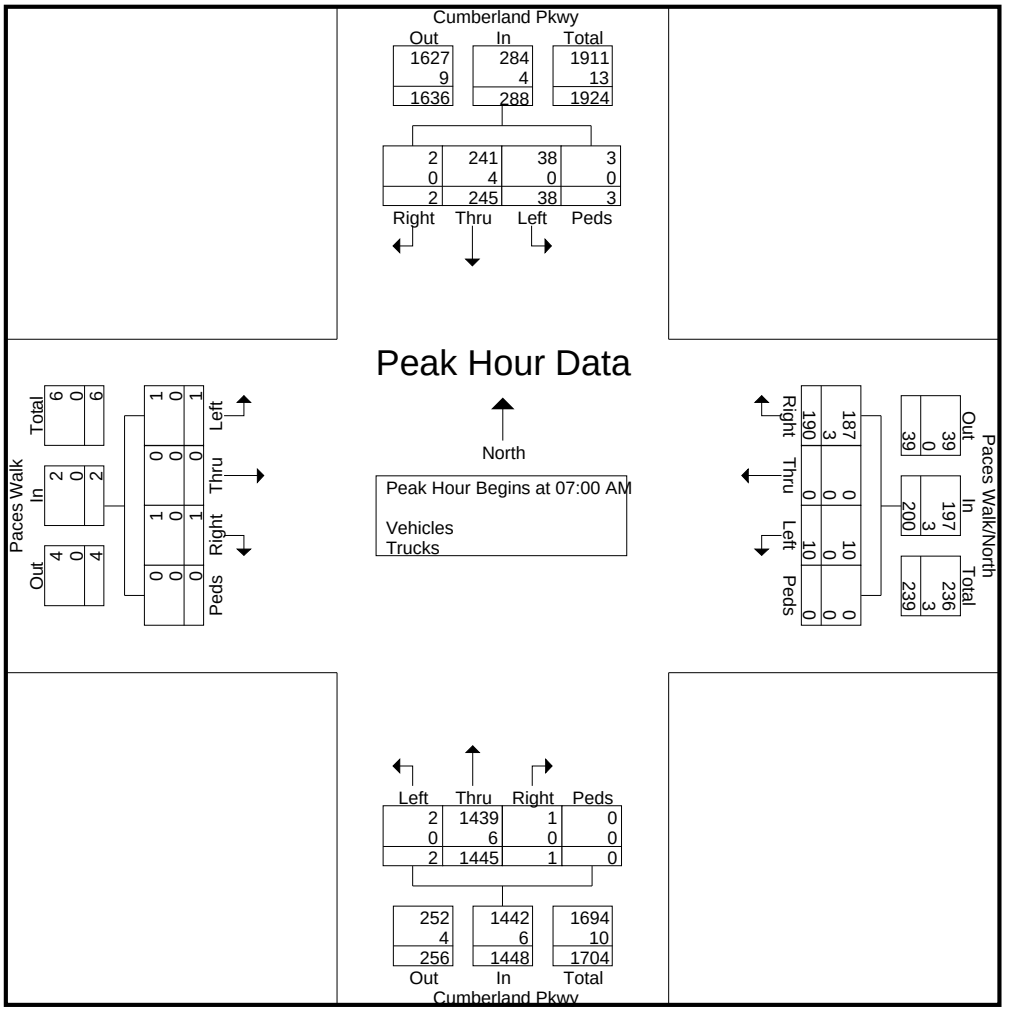
Groups Printed- Vehicles - Trucks

	Cumberland Pkwy Northbound					Cumberland Pkwy Southbound					Paces Walk Eastbound					Paces Walk/North 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	1	359	0	0	360	7	56	0	1	64	0	0	1	0	1	2	0	43	0	45	470
07:15 AM	0	422	0	0	422	4	66	1	0	71	1	0	0	0	1	2	0	58	0	60	554
07:30 AM	0	350	0	0	350	13	55	1	0	69	0	0	0	0	0	5	0	50	0	55	474
07:45 AM	1	314	1	0	316	14	68	0	2	84	0	0	0	0	0	1	0	39	0	40	440
Total	2	1445	1	0	1448	38	245	2	3	288	1	0	1	0	2	10	0	190	0	200	1938
08:00 AM	0	309	0	0	309	6	83	1	0	90	1	0	0	0	1	1	0	40	0	41	441
08:15 AM	1	330	0	0	331	8	89	0	0	97	0	0	1	0	1	3	0	43	0	46	475
08:30 AM	3	286	1	0	290	6	111	2	0	119	0	0	0	0	0	2	0	47	0	49	458
08:45 AM	3	290	2	0	295	8	121	0	0	129	0	0	0	0	0	1	0	29	0	30	454
Total	7	1215	3	0	1225	28	404	3	0	435	1	0	1	0	2	7	0	159	0	166	1828
*** BREAK ***																					
04:00 PM	0	109	1	0	110	22	290	2	0	314	0	0	0	0	0	1	0	15	0	16	440
04:15 PM	0	128	1	0	129	33	332	0	1	366	1	0	1	0	2	1	0	17	0	18	515
04:30 PM	0	156	2	0	158	24	346	0	1	371	1	0	0	0	1	0	0	17	0	17	547
04:45 PM	0	150	4	0	154	34	354	1	0	389	0	0	2	0	2	1	0	16	0	17	562
Total	0	543	8	0	551	113	1322	3	2	1440	2	0	3	0	5	3	0	65	0	68	2064
05:00 PM	0	153	1	1	155	38	391	0	1	430	0	0	4	0	4	8	0	14	0	22	611
05:15 PM	0	162	1	0	163	41	378	2	0	421	1	0	1	0	2	4	0	8	0	12	598
05:30 PM	0	139	1	1	141	35	370	2	1	408	1	0	0	0	1	1	0	18	0	19	569
05:45 PM	0	166	4	1	171	54	372	1	1	428	0	0	0	0	0	2	0	15	0	17	616
Total	0	620	7	3	630	168	1511	5	3	1687	2	0	5	0	7	15	0	55	0	70	2394
06:00 PM	1	135	3	0	139	47	336	1	1	385	2	0	0	0	2	2	0	19	0	21	547
06:15 PM	0	151	1	1	153	49	326	1	0	376	0	0	0	0	0	0	0	20	0	20	549
06:30 PM	0	142	3	0	145	32	327	2	1	362	0	0	1	0	1	0	0	20	0	20	528
06:45 PM	0	122	2	2	126	31	320	1	1	353	0	0	2	0	2	2	0	19	0	21	502
Total	1	550	9	3	563	159	1309	5	3	1476	2	0	3	0	5	4	0	78	0	82	2126
Grand Total	10	4373	28	6	4417	506	4791	18	11	5326	8	0	13	0	21	39	0	547	0	586	10350
Apprch %	0.2	99	0.6	0.1		9.5	90	0.3	0.2		38.1	0	61.9	0		6.7	0	93.3	0		
Total %	0.1	42.3	0.3	0.1	42.7	4.9	46.3	0.2	0.1	51.5	0.1	0	0.1	0	0.2	0.4	0	5.3	0	5.7	
Vehicles	10	4336	28	6	4380	506	4757	18	11	5292	8	0	13	0	21	38	0	542	0	580	10273
% Vehicles	100	99.2	100	100	99.2	100	99.3	100	100	99.4	100	0	100	0	100	97.4	0	99.1	0	99	99.3
Trucks	0	37	0	0	37	0	34	0	0	34	0	0	0	0	0	1	0	5	0	6	77
% Trucks	0	0.8	0	0	0.8	0	0.7	0	0	0.6	0	0	0	0	0	2.6	0	0.9	0	1	0.7

Greater Traffic Company

File Name : 02
Site Code : 00000002
Start Date : 8/23/2016
Page No : 2

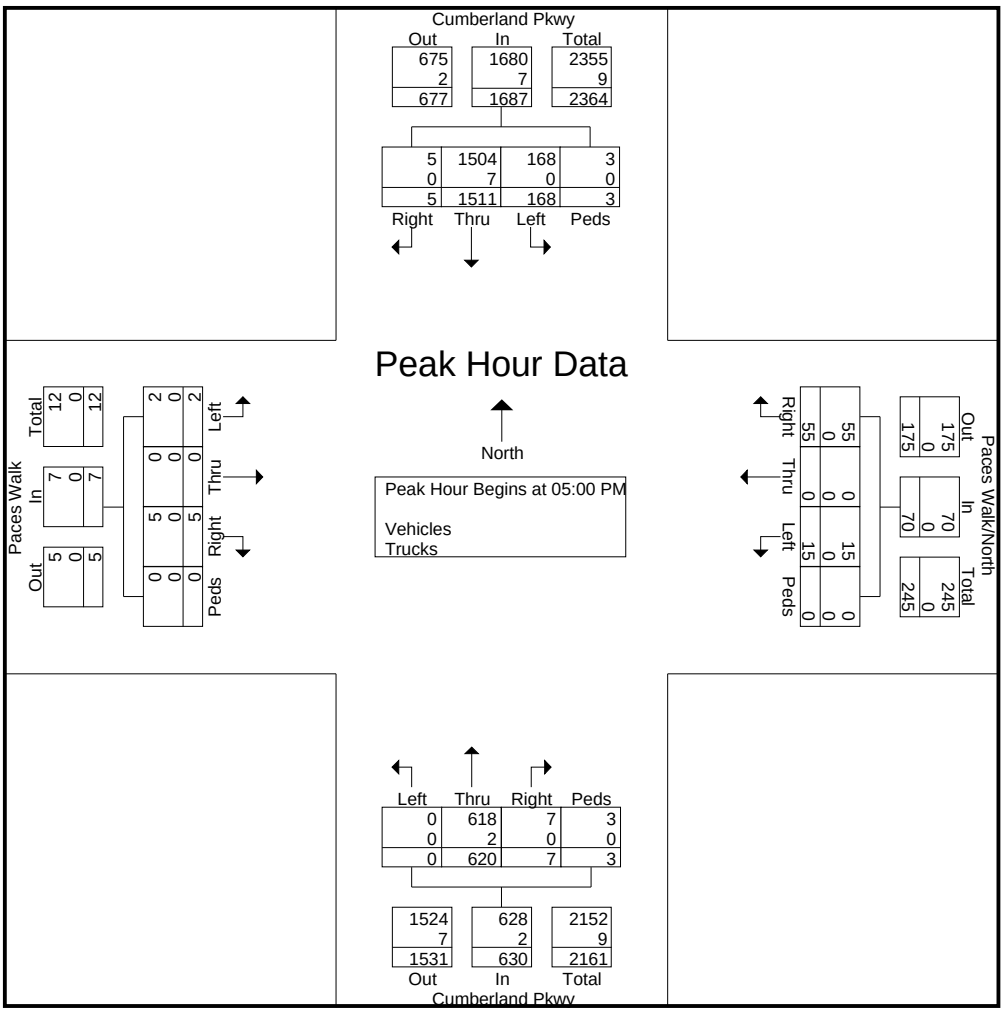
	Cumberland Pkwy Northbound					Cumberland Pkwy Southbound					Paces Walk Eastbound					Paces Walk/North Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	**1**	359	0	0	360	7	56	0	1	64	0	0	**1**	0	**1**	2	0	43	0	45	470
07:15 AM	0	**422**	0	0	**422**	4	66	**1**	0	71	**1**	0	0	0	1	2	0	**58**	0	**60**	**554**
07:30 AM	0	350	0	0	350	13	55	1	0	69	0	0	0	0	0	**5**	0	50	0	55	474
07:45 AM	1	314	**1**	0	316	**14**	**68**	0	**2**	**84**	0	0	0	0	0	1	0	39	0	40	440
Total Volume	2	1445	1	0	1448	38	245	2	3	288	1	0	1	0	2	10	0	190	0	200	1938
% App. Total	0.1	99.8	0.1	0		13.2	85.1	0.7	1		50	0	50	0		5	0	95	0		
PHF	.500	.856	.250	.000	.858	.679	.901	.500	.375	.857	.250	.000	.250	.000	.500	.500	.000	.819	.000	.833	.875
Vehicles	2	1439																			
% Vehicles	100	99.6	100	0	99.6	100	98.4	100	100	98.6	100	0	100	0	100	100	0	98.4	0	98.5	99.3
Trucks	0	6	0	0	6	0	4	0	0	4	0	0	0	0	0	0	0	3	0	3	13
% Trucks	0	0.4	0	0	0.4	0	1.6	0	0	1.4	0	0	0	0	0	0	0	1.6	0	1.5	0.7



Greater Traffic Company

File Name : 02
Site Code : 00000002
Start Date : 8/23/2016
Page No : 3

	Cumberland Pkwy Northbound					Cumberland Pkwy Southbound					Paces Walk Eastbound					Paces Walk/North 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 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	153	1	**1**	155	38	**391**	0	**1**	**430**	0	0	**4**	0	**4**	**8**	0	14	0	**22**	611
05:15 PM	0	162	1	0	163	41	378	**2**	0	421	**1**	0	1	0	2	4	0	8	0	12	598
05:30 PM	0	139	1	1	141	35	370	2	1	408	1	0	0	0	1	1	0	**18**	0	19	569
05:45 PM	0	**166**	**4**	1	**171**	**54**	372	1	1	428	0	0	0	0	0	2	0	15	0	17	**616**
Total Volume	0	620	7	3	630	168	1511	5	3	1687	2	0	5	0	7	15	0	55	0	70	2394
% App. Total	0	98.4	1.1	0.5		10	89.6	0.3	0.2		28.6	0	71.4	0		21.4	0	78.6	0		
PHF	.000	.934	.438	.750	.921	.778	.966	.625	.750	.981	.500	.000	.313	.000	.438	.469	.000	.764	.000	.795	.972
Vehicles	0	618	7	3	628	168	1504														
% Vehicles	0	99.7	100	100	99.7	100	99.5	100	100	99.6	100	0	100	0	100	100	0	100	0	100	99.6
Trucks	0	2	0	0	2	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	9
% Trucks	0	0.3	0	0	0.3	0	0.5	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0.4



Greater Traffic Company

File Name : 03
Site Code : 00000013
Start Date : 8/23/2016
Page No : 1

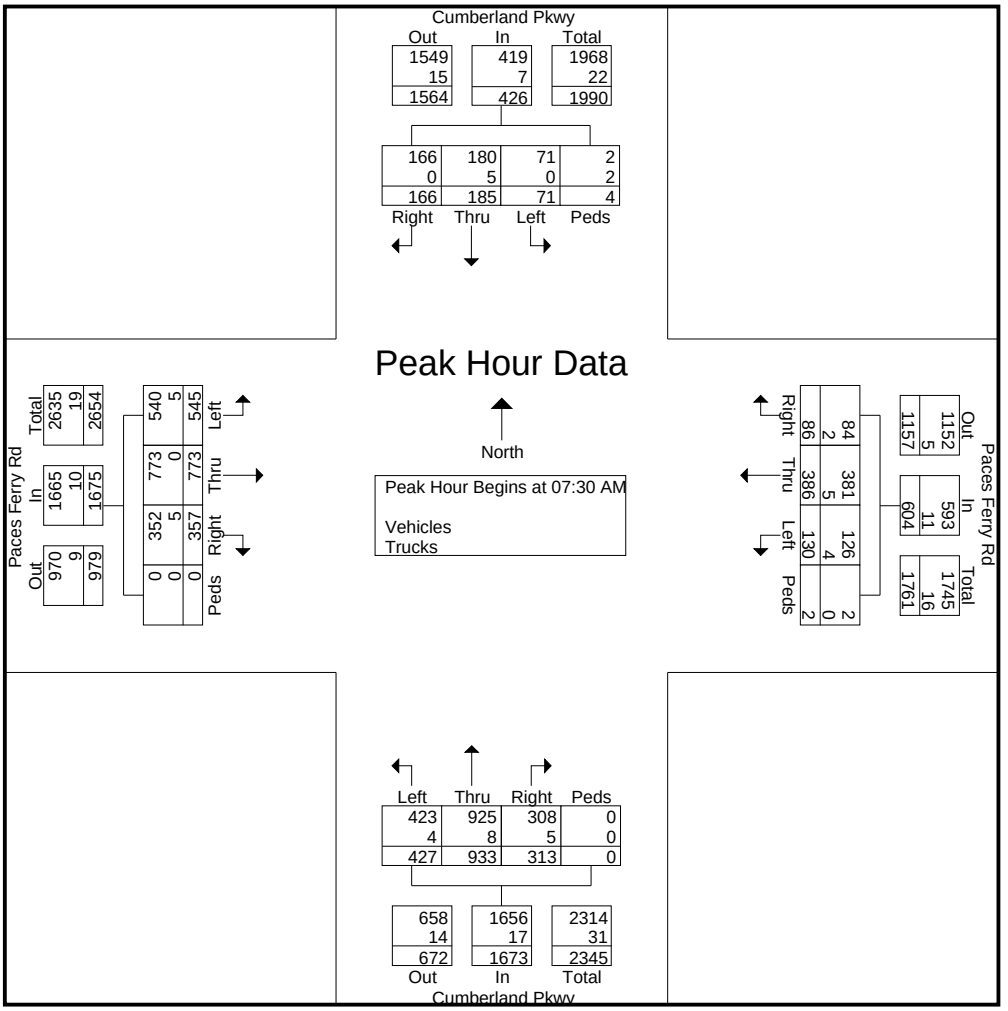
Groups Printed- Vehicles - Trucks

	Cumberland Pkwy Northbound					Cumberland Pkwy Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd 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	141	145	91	0	377	11	28	52	4	95	80	204	75	0	359	18	74	7	0	99	930
07:15 AM	80	170	84	0	334	8	34	51	0	93	94	240	77	0	411	25	79	15	0	119	957
07:30 AM	137	227	81	0	445	17	49	46	2	114	133	215	99	0	447	35	105	26	0	166	1172
07:45 AM	91	209	45	0	345	19	51	31	0	101	111	168	72	0	351	31	107	25	0	163	960
Total	449	751	301	0	1501	55	162	180	6	403	418	827	323	0	1568	109	365	73	0	547	4019
08:00 AM	98	279	81	0	458	19	44	45	2	110	152	184	85	0	421	34	98	19	0	151	1140
08:15 AM	101	218	106	0	425	16	41	44	0	101	149	206	101	0	456	30	76	16	2	124	1106
08:30 AM	114	222	77	1	414	15	48	36	6	105	150	216	88	0	454	40	83	38	2	163	1136
08:45 AM	102	206	61	0	369	19	43	39	2	103	141	144	56	0	341	27	93	36	0	156	969
Total	415	925	325	1	1666	69	176	164	10	419	592	750	330	0	1672	131	350	109	4	594	4351
*** BREAK ***																					
04:00 PM	95	86	41	0	222	22	144	107	0	273	44	118	123	0	285	68	222	21	0	311	1091
04:15 PM	77	79	37	0	193	18	192	93	0	303	43	89	113	0	245	76	178	22	0	276	1017
04:30 PM	93	108	52	0	253	18	217	94	0	329	35	76	135	0	246	95	193	24	0	312	1140
04:45 PM	94	90	37	0	221	24	199	80	0	303	43	104	100	0	247	72	180	22	0	274	1045
Total	359	363	167	0	889	82	752	374	0	1208	165	387	471	0	1023	311	773	89	0	1173	4293
05:00 PM	75	97	34	0	206	30	212	134	0	376	57	117	132	0	306	103	273	17	0	393	1281
05:15 PM	69	89	41	0	199	18	144	67	1	230	62	122	151	0	335	122	275	25	0	422	1186
05:30 PM	97	109	55	0	261	30	215	98	1	344	48	122	119	0	289	102	184	19	0	305	1199
05:45 PM	73	88	43	0	204	26	226	92	0	344	44	104	116	0	264	121	170	26	0	317	1129
Total	314	383	173	0	870	104	797	391	2	1294	211	465	518	0	1194	448	902	87	0	1437	4795
06:00 PM	94	91	35	0	220	21	195	85	0	301	59	103	99	0	261	129	189	19	0	337	1119
06:15 PM	104	103	35	0	242	31	191	70	0	292	40	105	64	0	209	80	168	24	0	272	1015
06:30 PM	102	103	55	0	260	24	184	99	0	307	51	130	87	0	268	87	166	18	0	271	1106
06:45 PM	91	81	58	0	230	12	107	60	1	180	40	94	71	0	205	82	125	17	0	224	839
Total	391	378	183	0	952	88	677	314	1	1080	190	432	321	0	943	378	648	78	0	1104	4079
Grand Total	1928	2800	1149	1	5878	398	2564	1423	19	4404	1576	2861	1963	0	6400	1377	3038	436	4	4855	21537
Apprch %	32.8	47.6	19.5	0		9	58.2	32.3	0.4		24.6	44.7	30.7	0		28.4	62.6	9	0.1		
Total %	9	13	5.3	0	27.3	1.8	11.9	6.6	0.1	20.4	7.3	13.3	9.1	0	29.7	6.4	14.1	2	0	22.5	
Vehicles	1907	2771	1133	1	5812	396	2540	1417	11	4364	1559	2853	1931	0	6343	1362	3013	430	4	4809	21328
% Vehicles	98.9	99	98.6	100	98.9	99.5	99.1	99.6	57.9	99.1	98.9	99.7	98.4	0	99.1	98.9	99.2	98.6	100	99.1	99
Trucks	21	29	16	0	66	2	24	6	8	40	17	8	32	0	57	15	25	6	0	46	209
% Trucks	1.1	1	1.4	0	1.1	0.5	0.9	0.4	42.1	0.9	1.1	0.3	1.6	0	0.9	1.1	0.8	1.4	0	0.9	1

Greater Traffic Company

File Name : 03
Site Code : 00000013
Start Date : 8/23/2016
Page No : 2

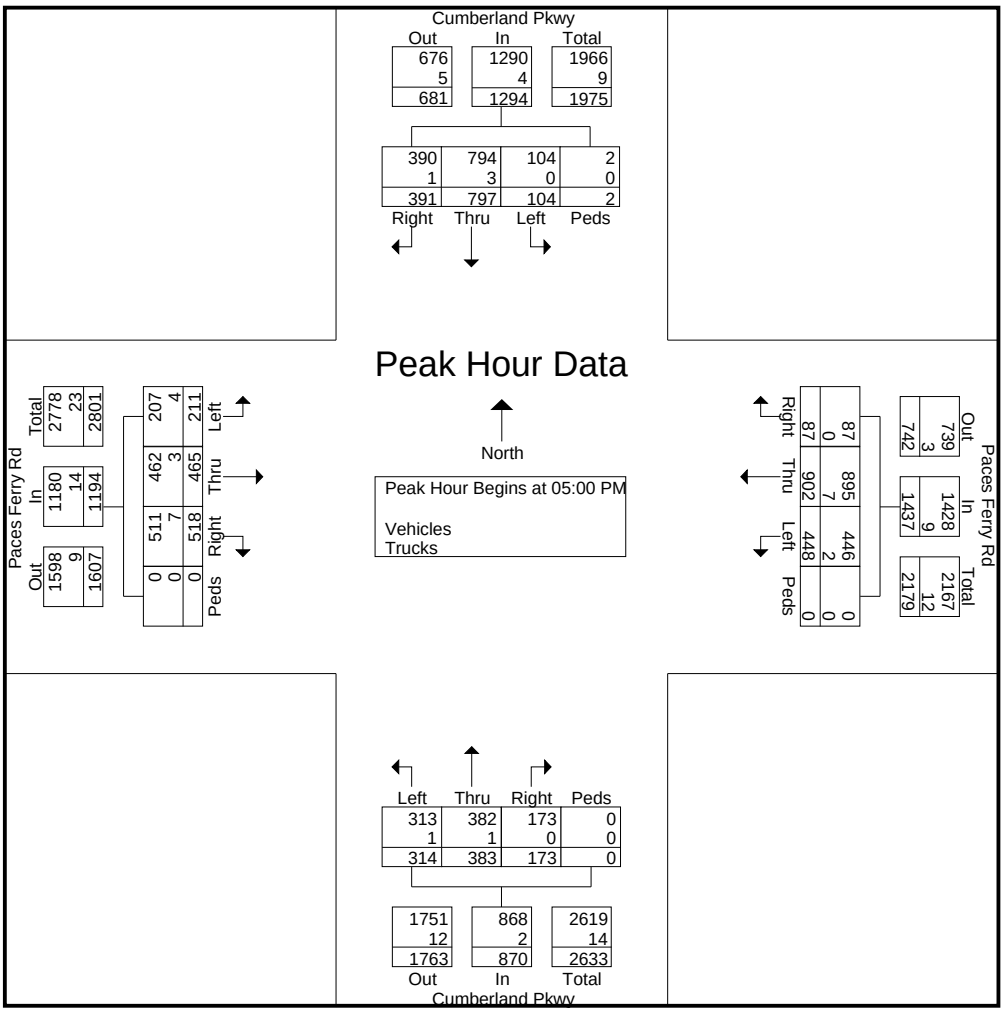
	Cumberland Pkwy Northbound					Cumberland Pkwy Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**137**	227	81	0	445	17	49	**46**	**2**	**114**	133	**215**	99	0	447	**35**	105	**26**	0	**166**	**1172**
07:45 AM	91	209	45	0	345	**19**	**51**	31	0	101	111	168	72	0	351	31	**107**	25	0	163	960
08:00 AM	98	**279**	81	0	**458**	19	44	45	2	110	**152**	184	85	0	421	34	98	19	0	151	1140
08:15 AM	101	218	**106**	0	425	16	41	44	0	101	149	206	**101**	0	**456**	30	76	16	**2**	124	1106
Total Volume	427	933	313	0	1673	71	185	166	4	426	545	773	357	0	1675	130	386	86	2	604	4378
% App. Total	25.5	55.8	18.7	0		16.7	43.4	39	0.9		32.5	46.1	21.3	0		21.5	63.9	14.2	0.3		
PHF	.779	.836	.738	.000	.913	.934	.907	.902	.500	.934	.896	.899	.884	.000	.918	.929	.902	.827	.250	.910	.934
Vehicles	423	925	308	0	1656	71	180	166	2	419	540	773	352	0	1665	126	381	84	2	593	4333
% Vehicles																					
Trucks	4	8	5	0	17	0	5	0	2	7	5	0	5	0	10	4	5	2	0	11	45
% Trucks	0.9	0.9	1.6	0	1.0	0	2.7	0	50.0	1.6	0.9	0	1.4	0	0.6	3.1	1.3	2.3	0	1.8	1.0



Greater Traffic Company

File Name : 03
Site Code : 00000013
Start Date : 8/23/2016
Page No : 3

	Cumberland Pkwy Northbound					Cumberland Pkwy Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd 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 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	75	97	34	0	206	**30**	212	**134**	0	**376**	57	117	132	0	306	103	273	17	0	393	**1281**
05:15 PM	69	89	41	0	199	18	144	67	**1**	230	**62**	**122**	**151**	0	**335**	**122**	**275**	25	0	**422**	1186
05:30 PM	**97**	**109**	**55**	0	**261**	30	215	98	1	344	48	122	119	0	289	102	184	19	0	305	1199
05:45 PM	73	88	43	0	204	26	**226**	92	0	344	44	104	116	0	264	121	170	**26**	0	317	1129
Total Volume	314	383	173	0	870	104	797	391	2	1294	211	465	518	0	1194	448	902	87	0	1437	4795
% App. Total	36.1	44	19.9	0		8	61.6	30.2	0.2		17.7	38.9	43.4	0		31.2	62.8	6.1	0		
PHF	.809	.878	.786	.000	.833	.867	.882	.729	.500	.860	.851	.953	.858	.000	.891	.918	.820	.837	.000	.851	.936
Vehicles	313	382	173	0	868	104	794	390	2	1290	207	462	511	0	1180	446	895	87	0	1428	4766
% Vehicles																					
Trucks	1	1	0	0	2	0	3	1	0	4	4	3	7	0	14	2	7	0	0	9	29
% Trucks	0.3	0.3	0	0	0.2	0	0.4	0.3	0	0.3	1.9	0.6	1.4	0	1.2	0.4	0.8	0	0	0.6	0.6



Greater Traffic Company

File Name : 04
Site Code : 00000004
Start Date : 8/23/2016
Page No : 1

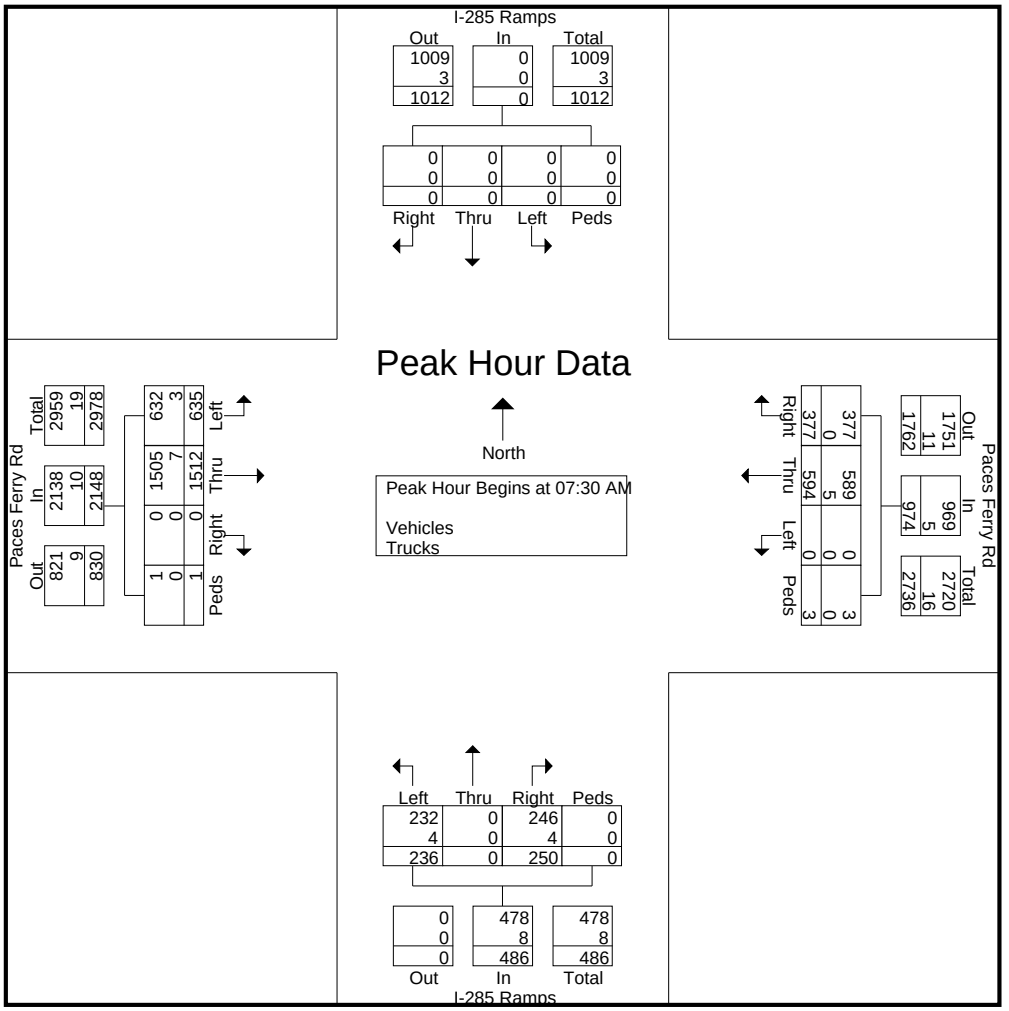
Groups Printed- Vehicles - Trucks

	I-285 Ramps Northbound					I-285 Ramps Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd 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	47	0	65	0	112	0	0	0	0	0	175	293	0	0	468	0	114	156	0	270	850
07:15 AM	45	0	50	0	95	0	0	0	0	0	224	359	0	0	583	0	83	117	1	201	879
07:30 AM	63	0	47	0	110	0	0	0	0	0	168	412	0	0	580	0	173	122	1	296	986
07:45 AM	74	0	72	0	146	0	0	0	0	0	163	324	0	0	487	0	136	81	0	217	850
Total	229	0	234	0	463	0	0	0	0	0	730	1388	0	0	2118	0	506	476	2	984	3565
08:00 AM	60	0	65	0	125	0	0	0	0	0	149	368	0	0	517	0	157	73	1	231	873
08:15 AM	39	0	66	0	105	0	0	0	0	0	155	408	0	1	564	0	128	101	1	230	899
08:30 AM	62	0	64	0	126	1	0	0	0	1	156	413	0	0	569	0	99	132	0	231	927
08:45 AM	57	0	69	0	126	0	0	0	0	0	109	354	0	1	464	0	129	99	0	228	818
Total	218	0	264	0	482	1	0	0	0	1	569	1543	0	2	2114	0	513	405	2	920	3517
*** BREAK ***																					
04:00 PM	44	0	49	0	93	0	0	0	0	0	182	270	0	0	452	0	236	176	0	412	957
04:15 PM	33	0	54	0	87	0	0	0	0	0	135	224	0	0	359	0	242	120	0	362	808
04:30 PM	58	0	41	0	99	0	0	0	0	0	135	229	0	1	365	0	251	127	0	378	842
04:45 PM	51	0	66	0	117	0	0	0	0	0	161	193	0	2	356	0	228	139	0	367	840
Total	186	0	210	0	396	0	0	0	0	0	613	916	0	3	1532	0	957	562	0	1519	3447
05:00 PM	44	0	59	0	103	0	0	0	0	0	187	234	0	0	421	0	289	178	0	467	991
05:15 PM	74	0	88	0	162	0	0	0	0	0	235	223	0	1	459	0	247	145	1	393	1014
05:30 PM	66	0	60	0	126	0	0	0	0	0	212	212	0	0	424	0	226	133	0	359	909
05:45 PM	61	0	57	0	118	0	0	0	0	0	149	215	0	1	365	0	202	115	1	318	801
Total	245	0	264	0	509	0	0	0	0	0	783	884	0	2	1669	0	964	571	2	1537	3715
06:00 PM	70	0	73	0	143	0	0	0	0	0	165	203	0	0	368	0	250	124	0	374	885
06:15 PM	57	0	44	0	101	0	0	0	0	0	134	172	0	0	306	0	221	104	0	325	732
06:30 PM	81	0	74	0	155	0	0	0	0	0	169	182	0	2	353	0	234	122	0	356	864
06:45 PM	48	0	40	0	88	0	0	0	0	0	106	148	0	0	254	0	194	93	0	287	629
Total	256	0	231	0	487	0	0	0	0	0	574	705	0	2	1281	0	899	443	0	1342	3110
Grand Total	1134	0	1203	0	2337	1	0	0	0	1	3269	5436	0	9	8714	0	3839	2457	6	6302	17354
Apprch %	48.5	0	51.5	0		100	0	0	0		37.5	62.4	0	0.1		0	60.9	39	0.1		
Total %	6.5	0	6.9	0	13.5	0	0	0	0	0	18.8	31.3	0	0.1	50.2	0	22.1	14.2	0	36.3	
Vehicles	1121	0	1188	0	2309	1	0	0	0	1	3254	5408	0	9	8671	0	3815	2457	6	6278	17259
% Vehicles	98.9	0	98.8	0	98.8	100	0	0	0	100	99.5	99.5	0	100	99.5	0	99.4	100	100	99.6	99.5
Trucks	13	0	15	0	28	0	0	0	0	0	15	28	0	0	43	0	24	0	0	24	95
% Trucks	1.1	0	1.2	0	1.2	0	0	0	0	0	0.5	0.5	0	0	0.5	0	0.6	0	0	0.4	0.5

Greater Traffic Company

File Name : 04
Site Code : 00000004
Start Date : 8/23/2016
Page No : 2

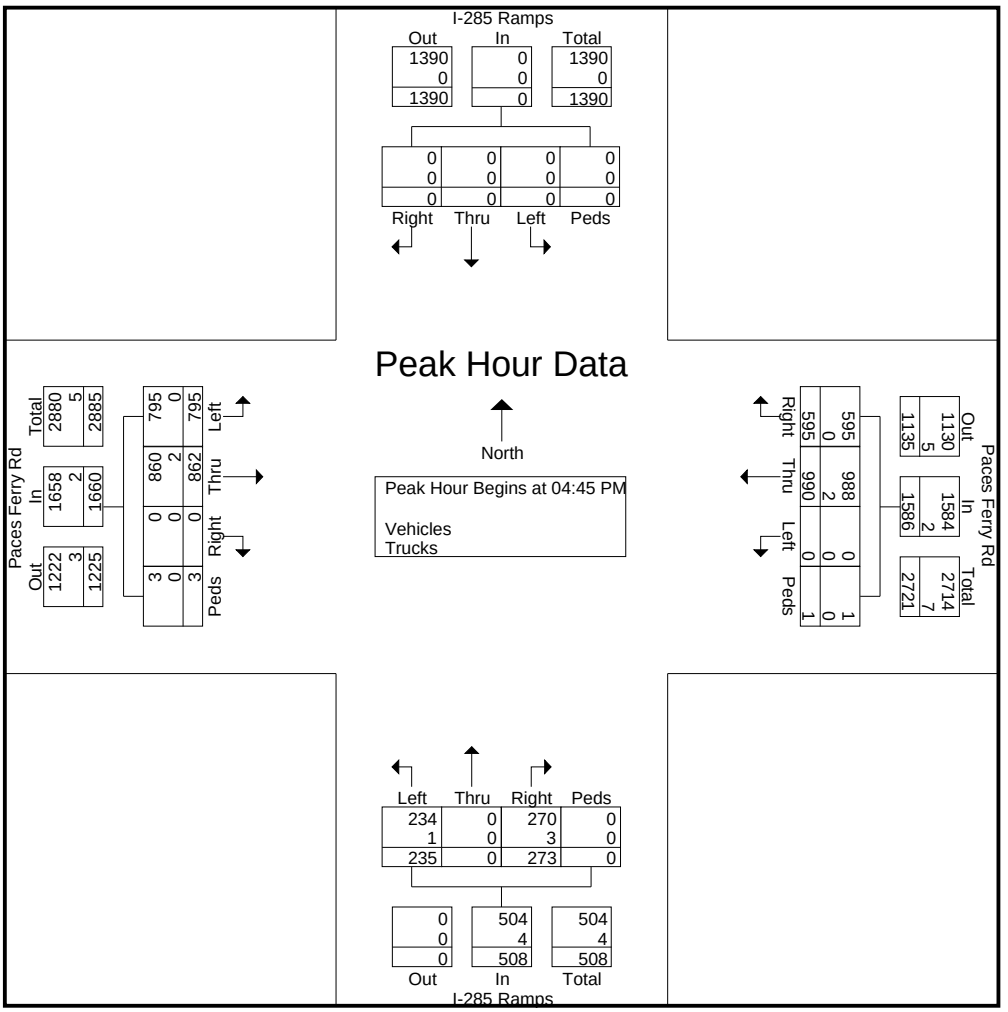
	I-285 Ramps Northbound					I-285 Ramps Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	63	0	47	0	110	0	0	0	0	0	**168**	**412**	0	0	**580**	0	**173**	**122**	**1**	**296**	**986**
07:45 AM	**74**	0	**72**	0	**146**	0	0	0	0	0	163	324	0	0	487	0	136	81	0	217	850
08:00 AM	60	0	65	0	125	0	0	0	0	0	149	368	0	0	517	0	157	73	1	231	873
08:15 AM	39	0	66	0	105	0	0	0	0	0	155	408	0	**1**	564	0	128	101	1	230	899
Total Volume	236	0	250	0	486	0	0	0	0	0	635	1512	0	1	2148	0	594	377	3	974	3608
% App. Total	48.6	0	51.4	0		0	0	0	0		29.6	70.4	0	0		0	61	38.7	0.3		
PHF	.797	.000	.868	.000	.832	.000	.000	.000	.000	.000	.945	.917	.000	.250	.926	.000	.858	.773	.750	.823	.915
Vehicles	232	0	246	0	478	0	0	0	0	0	632	1505									
% Vehicles	98.3	0	98.4	0	98.4	0	0	0	0	0	99.5	99.5	0	100	99.5	0	99.2	100	100	99.5	99.4
Trucks	4	0	4	0	8	0	0	0	0	0	3	7	0	0	10	0	5	0	0	5	23
% Trucks	1.7	0	1.6	0	1.6	0	0	0	0	0	0.5	0.5	0	0	0.5	0	0.8	0	0	0.5	0.6



Greater Traffic Company

File Name : 04
Site Code : 00000004
Start Date : 8/23/2016
Page No : 3

	I-285 Ramps Northbound					I-285 Ramps Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd 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 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	51	0	66	0	117	0	0	0	0	0	161	193	0	**2**	356	0	228	139	0	367	840
05:00 PM	44	0	59	0	103	0	0	0	0	0	187	**234**	0	0	421	0	**289**	**178**	0	**467**	991
05:15 PM	**74**	0	**88**	0	**162**	0	0	0	0	0	**235**	223	0	1	**459**	0	247	145	**1**	393	**1014**
05:30 PM	66	0	60	0	126	0	0	0	0	0	212	212	0	0	424	0	226	133	0	359	909
Total Volume	235	0	273	0	508	0	0	0	0	0	795	862	0	3	1660	0	990	595	1	1586	3754
% App. Total	46.3	0	53.7	0		0	0	0	0		47.9	51.9	0	0.2		0	62.4	37.5	0.1		
PHF	.794	.000	.776	.000	.784	.000	.000	.000	.000	.000	.846	.921	.000	.375	.904	.000	.856	.836	.250	.849	.926
Vehicles	234	0	270	0	504	0	0	0	0	0	795	860	0	3	1658	0	988	595	1	1584	3746
% Vehicles																					
Trucks	1	0	3	0	4	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	8
% Trucks	0.4	0	1.1	0	0.8	0	0	0	0	0	0	0.2	0	0	0.1	0	0.2	0	0	0.1	0.2



Greater Traffic Company

I-285 NB rt ramp

Start Time	Channel 1 A.M.	P.M.	Tue	23-Aug-16 A.M. Hourly	P.M. Hourly	
12:00	*	22				
12:15	*	26				
12:30	*	25				
12:45	*	30		0	103	
01:00	*	13				
01:15	*	24				
01:30	*	23				
01:45	*	29		0	89	
02:00	*	27				
02:15	*	21				
02:30	*	29				
02:45	*	27		0	104	
03:00	*	23				
03:15	*	28				
03:30	*	31				
03:45	*	31		0	113	
04:00	*	35				
04:15	*	34				
04:30	*	19				
04:45	*	20		0	108	
05:00	*	42				
05:15	*	40				
05:30	*	44				
05:45	*	34		0	160	
06:00	*	29				
06:15	*	31				
06:30	*	33				
06:45	*	32		0	125	
07:00	22	18				
07:15	18	*				
07:30	12	*				
07:45	10	*		62	18	
08:00	20	*				
08:15	17	*				
08:30	22	*				
08:45	15	*		74	0	
09:00	21	*				
09:15	14	*				
09:30	16	*				
09:45	24	*		75	0	
10:00	19	*				
10:15	26	*				
10:30	24	*				
10:45	31	*		100	0	
11:00	27	*				
11:15	24	*				
11:30	14	*				
11:45	30	*		95	0	
AM Peak	10:15	-	-	-	-	-
Vol.	108	-	-	-	-	-
P.H.F.	0.871					
PM Peak	-	05:00	-	-	-	-
Vol.	-	160	-	-	-	-
P.H.F.		0.909				
Combined Total	1226					

Greater Traffic Company

File Name : 05
Site Code : 00000005
Start Date : 8/23/2016
Page No : 1

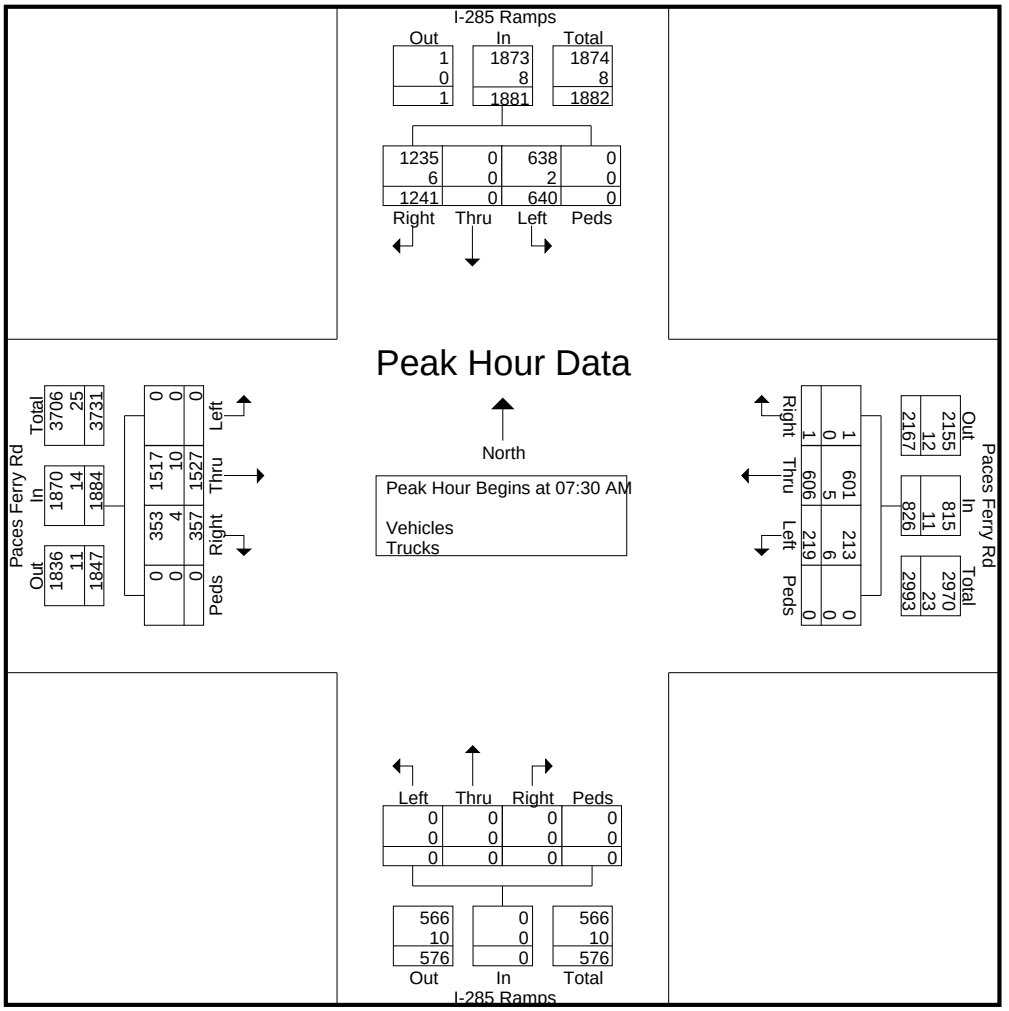
Groups Printed- Vehicles - Trucks

	I-285 Ramps Northbound					I-285 Ramps Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd 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	106	0	203	0	309	0	357	64	0	421	54	108	0	0	162	892
07:15 AM	0	0	0	0	0	92	0	229	0	321	0	506	83	0	589	57	140	0	0	197	1107
07:30 AM	0	0	0	0	0	157	0	278	0	435	0	440	103	0	543	48	167	1	0	216	1194
07:45 AM	0	0	0	0	0	143	0	308	0	451	0	338	91	0	429	54	159	0	0	213	1093
Total	0	0	0	0	0	498	0	1018	0	1516	0	1641	341	0	1982	213	574	1	0	788	4286
08:00 AM	0	0	0	0	0	169	0	314	0	483	0	346	84	0	430	61	147	0	0	208	1121
08:15 AM	0	0	0	0	0	171	0	341	0	512	0	403	79	0	482	56	133	0	0	189	1183
08:30 AM	0	0	0	0	0	137	1	306	0	444	0	422	70	0	492	62	109	0	0	171	1107
08:45 AM	0	0	0	0	0	145	0	264	0	409	0	338	46	0	384	48	147	0	0	195	988
Total	0	0	0	0	0	622	1	1225	0	1848	0	1509	279	0	1788	227	536	0	0	763	4399
*** BREAK ***																					
04:00 PM	0	0	0	0	0	103	0	188	0	291	0	350	74	0	424	161	199	0	0	360	1075
04:15 PM	0	0	0	0	0	84	0	162	0	246	0	303	63	0	366	119	182	0	0	301	913
04:30 PM	0	0	0	0	0	121	0	180	0	301	0	238	87	0	325	95	229	0	0	324	950
04:45 PM	0	0	0	0	0	83	0	149	0	232	0	270	75	0	345	97	217	0	0	314	891
Total	0	0	0	0	0	391	0	679	0	1070	0	1161	299	0	1460	472	827	0	0	1299	3829
05:00 PM	0	0	0	0	0	100	0	159	0	259	0	315	139	0	454	143	272	0	0	415	1128
05:15 PM	0	0	0	0	0	90	1	158	0	249	0	379	117	0	496	85	246	0	0	331	1076
05:30 PM	0	0	0	0	0	89	0	160	0	249	0	327	108	0	435	131	240	0	0	371	1055
05:45 PM	0	0	0	0	0	89	0	170	0	259	0	268	79	0	347	96	210	0	0	306	912
Total	0	0	0	0	0	368	1	647	0	1016	0	1289	443	0	1732	455	968	0	0	1423	4171
06:00 PM	0	0	0	0	0	84	1	186	0	271	0	281	100	0	381	81	257	0	0	338	990
06:15 PM	0	0	0	0	0	91	0	151	5	247	0	212	80	1	293	102	213	0	0	315	855
06:30 PM	0	0	0	0	0	102	0	176	0	278	0	267	60	0	327	85	212	0	0	297	902
06:45 PM	0	0	0	0	0	104	0	198	0	302	0	171	42	0	213	95	186	0	0	281	796
Total	0	0	0	0	0	381	1	711	5	1098	0	931	282	1	1214	363	868	0	0	1231	3543
Grand Total	0	0	0	0	0	2260	3	4280	5	6548	0	6531	1644	1	8176	1730	3773	1	0	5504	20228
Apprch %	0	0	0	0		34.5	0	65.4	0.1		0	79.9	20.1	0		31.4	68.6	0	0		
Total %	0	0	0	0	0	11.2	0	21.2	0	32.4	0	32.3	8.1	0	40.4	8.6	18.7	0	0	27.2	
Vehicles	0	0	0	0	0	2242	3	4253	5	6503	0	6489	1625	1	8115	1704	3745	1	0	5450	20068
% Vehicles	0	0	0	0	0	99.2	100	99.4	100	99.3	0	99.4	98.8	100	99.3	98.5	99.3	100	0	99	99.2
Trucks	0	0	0	0	0	18	0	27	0	45	0	42	19	0	61	26	28	0	0	54	160
% Trucks	0	0	0	0	0	0.8	0	0.6	0	0.7	0	0.6	1.2	0	0.7	1.5	0.7	0	0	1	0.8

Greater Traffic Company

File Name : 05
Site Code : 00000005
Start Date : 8/23/2016
Page No : 2

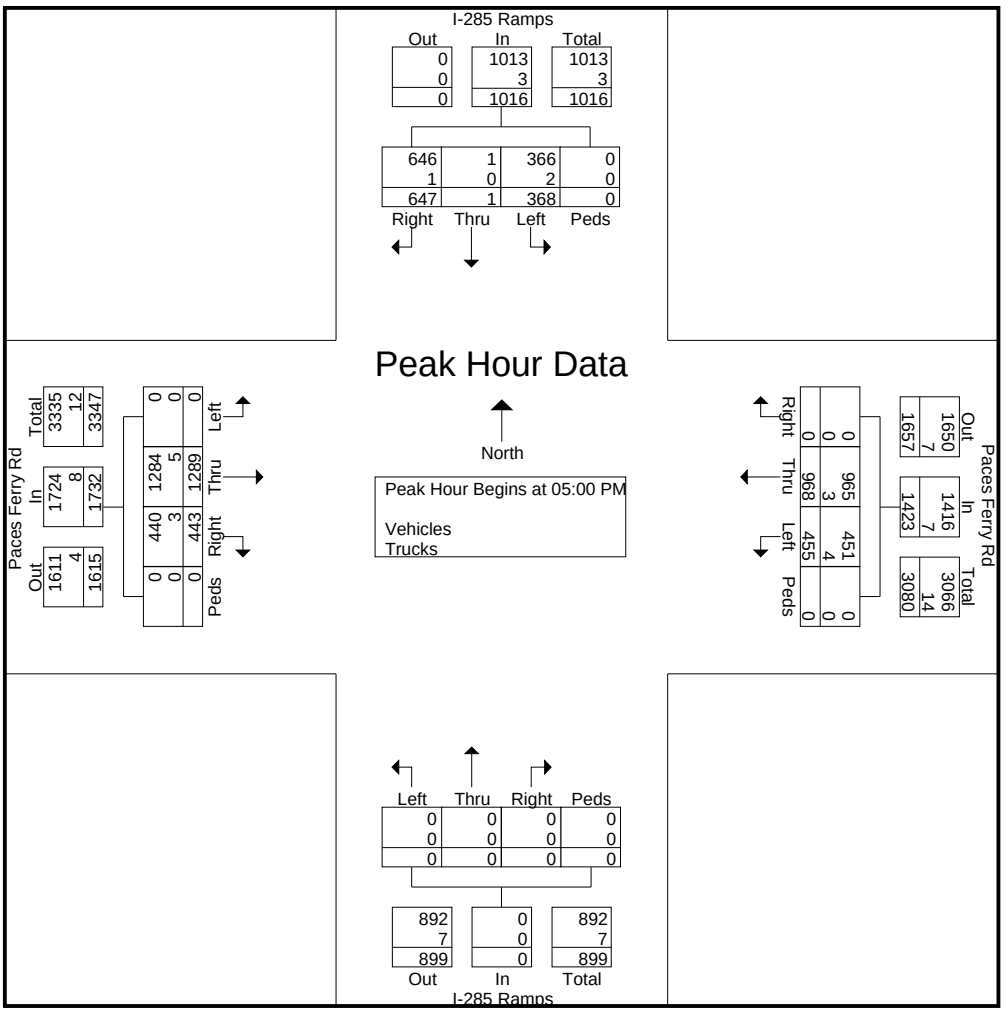
	I-285 Ramps Northbound					I-285 Ramps Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	157	0	278	0	435	0	**440**	**103**	0	**543**	48	**167**	**1**	0	**216**	**1194**
07:45 AM	0	0	0	0	0	143	0	308	0	451	0	338	91	0	429	54	159	0	0	213	1093
08:00 AM	0	0	0	0	0	169	0	314	0	483	0	346	84	0	430	**61**	147	0	0	208	1121
08:15 AM	0	0	0	0	0	**171**	0	**341**	0	**512**	0	403	79	0	482	56	133	0	0	189	1183
Total Volume	0	0	0	0	0	640	0	1241	0	1881	0	1527	357	0	1884	219	606	1	0	826	4591
% App. Total	0	0	0	0		34	0	66	0		0	81.1	18.9	0		26.5	73.4	0.1	0		
PHF	.000	.000	.000	.000	.000	.936	.000	.910	.000	.918	.000	.868	.867	.000	.867	.898	.907	.250	.000	.956	.961
Vehicles	0	0	0	0	0	638	0	1235				1517									
% Vehicles	0	0	0	0	0	99.7	0	99.5	0	99.6	0	99.3	98.9	0	99.3	97.3	99.2	100	0	98.7	99.3
Trucks	0	0	0	0	0	2	0	6	0	8	0	10	4	0	14	6	5	0	0	11	33
% Trucks	0	0	0	0	0	0.3	0	0.5	0	0.4	0	0.7	1.1	0	0.7	2.7	0.8	0	0	1.3	0.7



Greater Traffic Company

File Name : 05
Site Code : 00000005
Start Date : 8/23/2016
Page No : 3

	I-285 Ramps Northbound					I-285 Ramps Southbound					Paces Ferry Rd Eastbound					Paces Ferry Rd 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 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	**100**	0	159	0	**259**	0	315	**139**	0	454	**143**	**272**	0	0	**415**	**1128**
05:15 PM	0	0	0	0	0	90	**1**	158	0	249	0	**379**	117	0	**496**	85	246	0	0	331	1076
05:30 PM	0	0	0	0	0	89	0	160	0	249	0	327	108	0	435	131	240	0	0	371	1055
05:45 PM	0	0	0	0	0	89	0	**170**	0	259	0	268	79	0	347	96	210	0	0	306	912
Total Volume	0	0	0	0	0	368	1	647	0	1016	0	1289	443	0	1732	455	968	0	0	1423	4171
% App. Total	0	0	0	0		36.2	0.1	63.7	0		0	74.4	25.6	0		32	68	0	0		
PHF	.000	.000	.000	.000	.000	.920	.250	.951	.000	.981	.000	.850	.797	.000	.873	.795	.890	.000	.000	.857	.924
Vehicles	0	0	0	0	0	366	1	646	0	1013	0	1284									
% Vehicles	0	0	0	0	0	99.5	100	99.8	0	99.7	0	99.6	99.3	0	99.5	99.1	99.7	0	0	99.5	99.6
Trucks	0	0	0	0	0	2	0	1	0	3	0	5	3	0	8	4	3	0	0	7	18
% Trucks	0	0	0	0	0	0.5	0	0.2	0	0.3	0	0.4	0.7	0	0.5	0.9	0.3	0	0	0.5	0.4



Greater Traffic Company

File Name : 06
Site Code : 6
Start Date : 8/23/2016
Page No : 1

Groups Printed- Vehicles - Trucks

	Cumberlland Pkwy Northbound					Cumberlland Pkwy Southbound					Cumberland Blvd Eastbound					Cumberland Blvd 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	52	15	151	0	218	2	4	0	0	6	8	115	56	0	179	46	10	2	0	58	461
07:15 AM	69	12	261	0	342	0	10	0	0	10	11	110	51	0	172	38	18	1	0	57	581
07:30 AM	76	25	337	1	439	1	5	1	0	7	13	115	65	0	193	59	20	0	0	79	718
07:45 AM	75	19	261	0	355	0	5	2	0	7	13	100	72	0	185	75	23	2	0	100	647
Total	272	71	1010	1	1354	3	24	3	0	30	45	440	244	0	729	218	71	5	0	294	2407
08:00 AM	84	27	339	1	451	1	10	3	0	14	12	119	52	0	183	72	21	2	0	95	743
08:15 AM	85	17	292	1	395	0	4	6	0	10	9	135	80	0	224	55	26	3	0	84	713
08:30 AM	91	16	291	0	398	3	5	7	0	15	10	149	78	0	237	58	24	2	0	84	734
08:45 AM	84	18	259	0	361	2	4	9	0	15	17	134	83	0	234	73	31	2	0	106	716
Total	344	78	1181	2	1605	6	23	25	0	54	48	537	293	0	878	258	102	9	0	369	2906
*** BREAK ***																					
04:00 PM	55	35	95	0	185	11	69	36	2	118	33	48	94	0	175	236	110	5	0	351	829
04:15 PM	64	21	102	0	187	8	56	30	0	94	17	40	69	0	126	176	132	4	0	312	719
04:30 PM	74	38	112	0	224	9	68	37	0	114	29	49	86	1	165	236	134	1	0	371	874
04:45 PM	64	26	114	4	208	2	61	37	0	100	25	37	96	1	159	245	130	6	0	381	848
Total	257	120	423	4	804	30	254	140	2	426	104	174	345	2	625	893	506	16	0	1415	3270
05:00 PM	82	33	128	1	244	10	79	22	0	111	31	52	84	0	167	233	126	5	0	364	886
05:15 PM	89	23	160	0	272	10	75	40	0	125	24	41	106	0	171	300	135	5	0	440	1008
05:30 PM	74	36	156	0	266	4	72	39	1	116	43	64	138	0	245	295	150	2	0	447	1074
05:45 PM	61	29	124	0	214	5	78	38	0	121	25	25	73	0	123	248	113	6	0	367	825
Total	306	121	568	1	996	29	304	139	1	473	123	182	401	0	706	1076	524	18	0	1618	3793
06:00 PM	77	27	122	0	226	4	72	42	0	118	41	53	114	0	208	287	119	14	0	420	972
06:15 PM	62	38	110	0	210	9	50	40	0	99	21	50	78	0	149	171	121	2	0	294	752
06:30 PM	64	27	107	1	199	8	38	41	2	89	30	47	80	0	157	197	122	7	1	327	772
06:45 PM	48	41	96	0	185	4	46	34	1	85	25	42	69	3	139	173	96	9	0	278	687
Total	251	133	435	1	820	25	206	157	3	391	117	192	341	3	653	828	458	32	1	1319	3183
Grand Total	1430	523	3617	9	5579	93	811	464	6	1374	437	1525	1624	5	3591	3273	1661	80	1	5015	15559
Apprch %	25.6	9.4	64.8	0.2		6.8	59	33.8	0.4		12.2	42.5	45.2	0.1		65.3	33.1	1.6	0		
Total %	9.2	3.4	23.2	0.1	35.9	0.6	5.2	3	0	8.8	2.8	9.8	10.4	0	23.1	21	10.7	0.5	0	32.2	
Vehicles	1417	522	3607	9	5555	68	802	445	6	1321	434	1495	1615	5	3549	3256	1646	80	1	4983	15408
% Vehicles	99.1	99.8	99.7	100	99.6	73.1	98.9	95.9	100	96.1	99.3	98	99.4	100	98.8	99.5	99.1	100	100	99.4	99
Trucks	13	1	10	0	24	25	9	19	0	53	3	30	9	0	42	17	15	0	0	32	151
% Trucks	0.9	0.2	0.3	0	0.4	26.9	1.1	4.1	0	3.9	0.7	2	0.6	0	1.2	0.5	0.9	0	0	0.6	1

Greater Traffic Company

File Name : 06
Site Code : 6
Start Date : 8/23/2016
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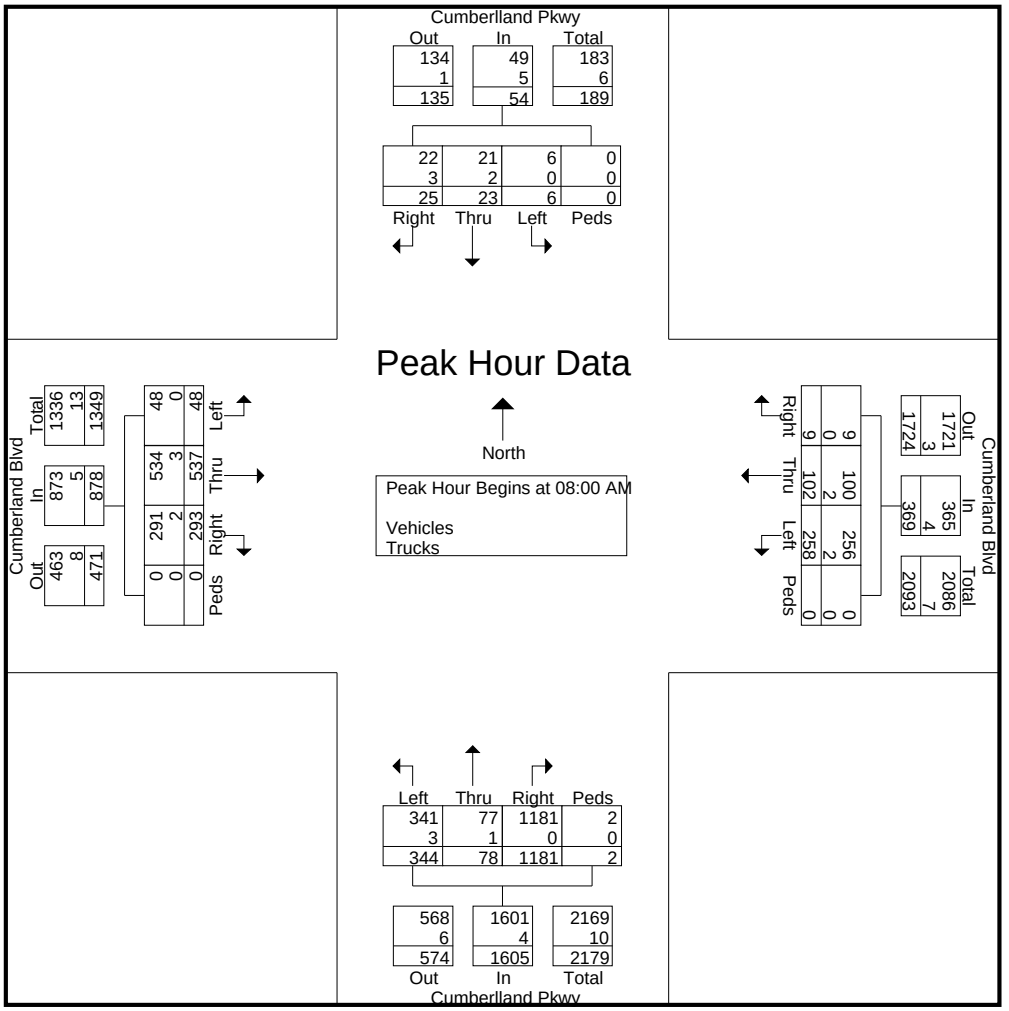
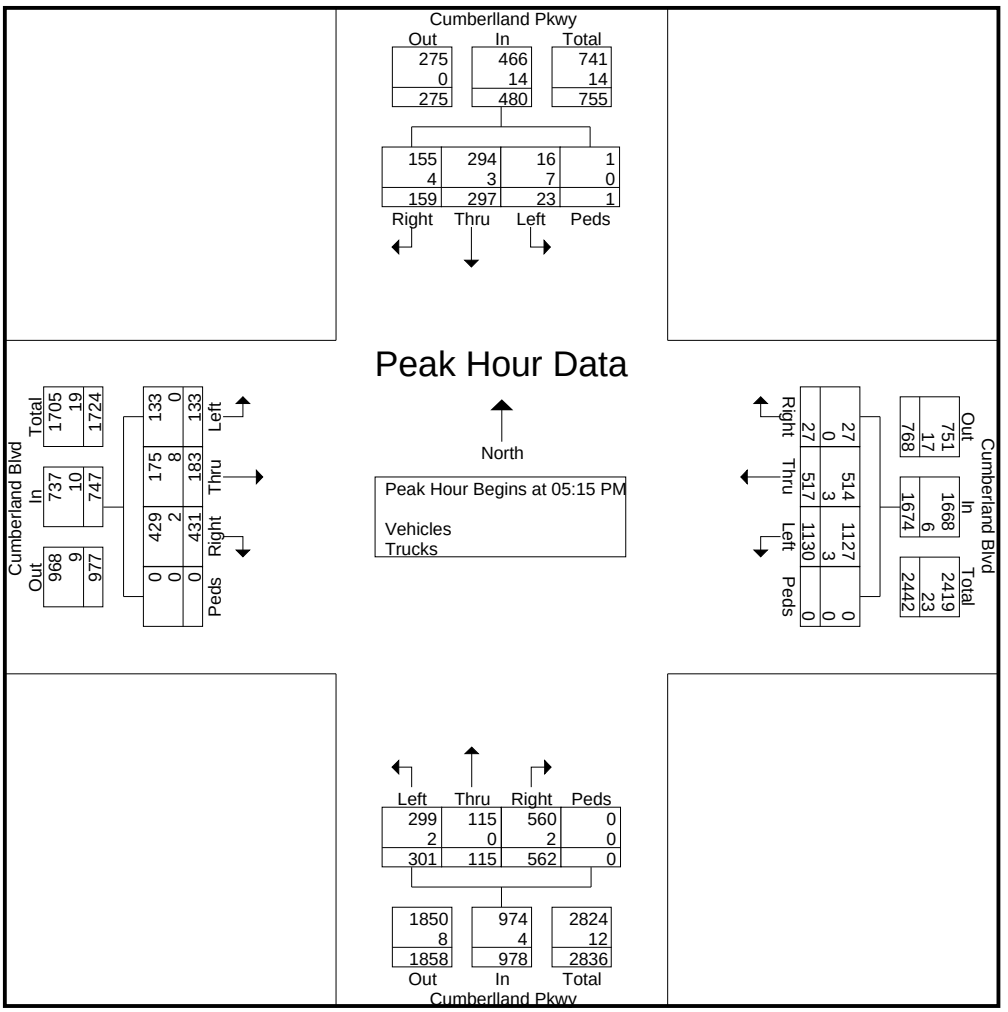
	Cumberlland Pkwy Northbound					Cumberlland Pkwy Southbound					Cumberland Blvd Eastbound					Cumberland Blvd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	84	**27**	**339**	**1**	**451**	1	**10**	3	0	14	12	119	52	0	183	72	21	2	0	95	**743**
08:15 AM	85	17	292	1	395	0	4	6	0	10	9	135	80	0	224	55	26	**3**	0	84	713
08:30 AM	**91**	16	291	0	398	**3**	5	7	0	**15**	10	**149**	78	0	**237**	58	24	2	0	84	734
08:45 AM	84	18	259	0	361	2	4	**9**	0	15	**17**	134	**83**	0	234	**73**	**31**	2	0	**106**	716
Total Volume	344	78	1181	2	1605	6	23	25	0	54	48	537	293	0	878	258	102	9	0	369	2906
% App. Total	21.4	4.9	73.6	0.1		11.1	42.6	46.3	0		5.5	61.2	33.4	0		69.9	27.6	2.4	0		
PHF	.945	.722	.871	.500	.890	.500	.575	.694	.000	.900	.706	.901	.883	.000	.926	.884	.823	.750	.000	.870	.978
Vehicles	341	77	1181																		
% Vehicles	99.1	98.7	100	100	99.8	100	91.3	88.0	0	90.7	100	99.4	99.3	0	99.4	99.2	98.0	100	0	98.9	99.4
Trucks	3	1	0	0	4	0	2	3	0	5	0	3	2	0	5	2	2	0	0	4	18
% Trucks	0.9	1.3	0	0	0.2	0	8.7	12.0	0	9.3	0	0.6	0.7	0	0.6	0.8	2.0	0	0	1.1	0.6



Greater Traffic Company

File Name : 06
Site Code : 6
Start Date : 8/23/2016
Page No : 3

	Cumberlland Pkwy Northbound					Cumberlland Pkwy Southbound					Cumberland Blvd Eastbound					Cumberland Blvd 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 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	**89**	23	**160**	0	**272**	**10**	75	40	0	**125**	24	41	106	0	171	**300**	135	5	0	440	1008
05:30 PM	74	**36**	156	0	266	4	72	39	**1**	116	**43**	**64**	**138**	0	**245**	295	**150**	2	0	**447**	**1074**
05:45 PM	61	29	124	0	214	5	**78**	38	0	121	25	25	73	0	123	248	113	6	0	367	825
06:00 PM	77	27	122	0	226	4	72	**42**	0	118	41	53	114	0	208	287	119	**14**	0	420	972
Total Volume	301	115	562	0	978	23	297	159	1	480	133	183	431	0	747	1130	517	27	0	1674	3879
% App. Total	30.8	11.8	57.5	0		4.8	61.9	33.1	0.2		17.8	24.5	57.7	0		67.5	30.9	1.6	0		
PHF	.846	.799	.878	.000	.899	.575	.952	.946	.250	.960	.773	.715	.781	.000	.762	.942	.862	.482	.000	.936	.903
Vehicles	299	115	560	0	974	16	294	155	1	466	133	175	429	0	737	1127					
% Vehicles	99.3	100	99.6	0	99.6	69.6	99.0	97.5	100	97.1	100	95.6	99.5	0	98.7	99.7	99.4	100	0	99.6	99.1
Trucks	2	0	2	0	4	7	3	4	0	14	0	8	2	0	10	3	3	0	0	6	34
% Trucks	0.7	0	0.4	0	0.4	30.4	1.0	2.5	0	2.9	0	4.4	0.5	0	1.3	0.3	0.6	0	0	0.4	0.9



Appendix C

STUDY NETWORK DATA

Vinings Atlanta Study Network: 2016 Existing Traffic

	AM Peak	PM Peak
Avg Peak Hour	7:30 AM	5:00 PM

1: Atlanta Road at Cumberland Parkway

	ATLANTA ROAD Northbound			ATLANTA ROAD Southbound			CUMBERLAND PARKWAY Eastbound			CUMBERLAND PARKWAY Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	474	422	59	135	645	163	533	1176	1160	134	193	119
(PM)	1057	905	86	73	638	300	206	352	469	245	993	118

2: Paces Walk at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			BROOKDALE VININGS Eastbound			PACES WALK/NORTH Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	2	1303	1	41	295	2	1	0	1	10	0	172
(PM)	0	620	7	168	1511	5	2	0	5	15	0	55

3: Paces Ferry Road at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	427	933	313	71	185	166	545	773	357	130	386	86
(PM)	314	383	173	104	797	391	211	465	518	448	902	87

4: I-285 Northbound Ramps at Paces Ferry Road

	I-285 NB EXIT RAMP Northbound				I-285 NB ON RAMP			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Rgt Ramp	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	236	0	250	59	0	0	0	635	1512	0	0	594	377
(PM)	245	0	264	160	0	0	0	783	884	0	0	964	571

5: I-285 Southbound Ramps at Paces Ferry Road

	I-285 SB RAMPS Northbound			I-285 SB RAMPS Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	0	0	640	0	1241	0	1527	357	219	606	1
(PM)	0	0	0	368	1	647	0	1289	443	455	968	0

6: Cumberland Boulevard at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			CUMBERLAND BOULEVARD Eastbound			CUMBERLAND BOULEVARD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	320	88	1229	2	24	12	47	469	269	261	90	7
(PM)	306	121	568	29	304	139	123	182	401	1076	524	18

7: Vinings Atlanta Driveway #1 at Cumberland Parkway (Existing Traffic at Future location)

	CUMBERLAND PARKWAY			CUMBERLAND PARKWAY						VININGS ATL DWY #1		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	1270	0	0	341	n/a	n/a	n/a	n/a	0	n/a	0
(PM)	n/a	628	0	0	1499	n/a	n/a	n/a	n/a	0	n/a	0

8: Vinings Atlanta Driveway #2 at Cumberland Parkway (Existing Traffic at Future location)

	CUMBERLAND PARKWAY			CUMBERLAND PARKWAY						VININGS ATL DWY #2		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	1270	0	0	341	n/a	n/a	n/a	n/a	0	n/a	0
(PM)	n/a	628	0	0	1499	n/a	n/a	n/a	n/a	0	n/a	0

9: Vinings Atlanta Driveway #3 at Paces Walk (Existing Traffic at Future location)

	VININGS ATL DWY #3						PACES WALK			PACES WALK		Westbound
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	n/a	0	n/a	n/a	n/a	n/a	42	0	0	182	n/a
(PM)	0	n/a	0	n/a	n/a	n/a	n/a	175	0	0	70	n/a

Vinings Atlanta Study Network: 2019 "No Build" Traffic

Current Year: 2016 Build Year: 2019 AGR: 2.0%

1: Atlanta Road at Cumberland Parkway

	ATLANTA ROAD Northbound			ATLANTA ROAD Southbound			CUMBERLAND PARKWAY Eastbound			CUMBERLAND PARKWAY Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	502	447	63	143	684	173	565	1247	1230	142	205	126
(PM)	1120	959	91	77	676	318	218	373	497	260	1053	125

2: Paces Walk at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			BROOKDALE VININGS Eastbound			PACES WALK/NORTH Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	2	1381	1	43	313	2	1	0	1	11	0	182
(PM)	0	657	7	178	1602	5	2	0	5	16	0	58

3: Paces Ferry Road at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	453	989	332	75	196	176	578	819	378	138	409	91
(PM)	333	406	183	110	845	414	224	493	549	475	956	92

4: I-285 Northbound Ramps at Paces Ferry Road

	I-285 NB EXIT RAMP Northbound				I-285 NB ON RAMP			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Rgt Ramp	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	250	0	265	63	0	0	0	673	1603	0	0	630	400
(PM)	260	0	280	170	0	0	0	830	937	0	0	1022	605

5: I-285 Southbound Ramps at Paces Ferry Road

	I-285 SB RAMPS Northbound			I-285 SB RAMPS Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	0	0	678	0	1315	0	1619	378	232	642	1
(PM)	0	0	0	390	1	686	0	1366	470	482	1026	0

6: Cumberland Boulevard at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			CUMBERLAND BOULEVARD Eastbound			CUMBERLAND BOULEVARD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	339	93	1303	2	25	13	50	497	285	277	95	7
(PM)	324	128	602	31	322	147	130	193	425	1141	555	19

7: Vinings Atlanta Driveway #1 at Cumberland Parkway (Background Traffic at Future location)

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #1 Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	1346	0	0	361	n/a	n/a	n/a	n/a	0	n/a	0
(PM)	n/a	666	0	0	1589	n/a	n/a	n/a	n/a	0	n/a	0

8: Vinings Atlanta Driveway #2 at Cumberland Parkway (Background Traffic at Future location)

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #2 Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	1346	0	0	361	n/a	n/a	n/a	n/a	0	n/a	0
(PM)	n/a	666	0	0	1589	n/a	n/a	n/a	n/a	0	n/a	0

9: Vinings Atlanta Driveway #3 at Paces Walk (Background Traffic at Future location)

	VININGS ATL DWY #3 Northbound			Southbound			PACES WALK Eastbound			PACES WALK Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	n/a	0	n/a	n/a	n/a	n/a	45	0	0	193	n/a
(PM)	0	n/a	0	n/a	n/a	n/a	n/a	186	0	0	74	n/a

Vinings Atlanta Trip Distribution by Intersection

1: Atlanta Road at Cumberland Parkway

	ATLANTA ROAD Northbound			ATLANTA ROAD Southbound			CUMBERLAND PARKWAY Eastbound			CUMBERLAND PARKWAY Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	0%	0%	20%	6%	0%	0%	0%	7%	0%	20%	7%	6%

2: Paces Walk at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			BROOKDALE VININGS Eastbound			PACES WALK/NORTH Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	0%	54%	0%	3%	54%	0%	0%	0%	0%	0%	0%	3%

3: Paces Ferry Road at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	38%	16%	3%	0%	16%	0%	0%	0%	38%	3%	0%	0%

4: I-285 Northbound Ramps at Paces Ferry Road

	I-285 NB EXIT RAMP Northbound				I-285 NB ON RAMP			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
	Left	Thru	Right	Rgt Ramp	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	0%	n/a	0%	0%	n/a	n/a	n/a	0%	38%	n/a	n/a	0%	38%

5: I-285 Southbound Ramps at Paces Ferry Road

	I-285 SB ON RAMP			I-285 SB EXIT RAMP Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	n/a	n/a	n/a	38%	n/a	0%	n/a	0%	0%	0%	0%	n/a

6: Cumberland Boulevard at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			CUMBERLAND BOULEVARD Eastbound			CUMBERLAND BOULEVARD Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	8%	0%	8%	0%	0%	0%	0%	0%	8%	8%	0%	0%

7: Vinings Atlanta Driveway #1 at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #1 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	n/a	1%	41%	54%	0%	n/a	n/a	n/a	n/a	43%	n/a	53%

8: Vinings Atlanta Driveway #2 at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #2 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	n/a	41%	2%	n/a	43%	n/a	n/a	n/a	n/a	n/a	n/a	1%

9: Vinings Atlanta Driveway #3 at Paces Walk

	VININGS ATL DWY #3 Northbound			Southbound			PACES WALK Eastbound			PACES WALK Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
% Distribution	3%	n/a	0%	n/a	n/a	n/a	n/a	0%	3%	0%	0%	n/a

Note: Highlighted trips represent exiting trips.

Assumptions

1. Approximately 10% of ALL traffic begins and end south of development's driveway before Atlanta Road.
2. Approximately 3% of ALL traffic begins and end south of Atlanta Road before I-285 Interchange.

Vinings Atlanta Generated Trips

	Total Generated Trips		
	Enter	Exit	Total
AM	541	436	977
(PM)	433	478	910

1: Atlanta Road at Cumberland Parkway

	ATLANTA ROAD Northbound			ATLANTA ROAD Southbound			CUMBERLAND PARKWAY Eastbound			CUMBERLAND PARKWAY Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	0	108	32	0	0	0	38	0	87	31	26
(PM)	0	0	87	26	0	0	0	30	0	96	33	29

2: Paces Walk at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			BROOKDALE VININGS Eastbound			PACES WALK/NORTH Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	235	0	16	292	0	0	0	0	0	0	13
(PM)	0	258	0	13	234	0	0	0	0	0	0	14

3: Paces Ferry Road at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	166	70	13	0	87	0	0	0	206	16	0	0
(PM)	182	76	14	0	69	0	0	0	165	13	0	0

4: I-285 Northbound Ramps at Paces Ferry Road

	I-285 NB EXIT RAMP Northbound				I-285 NB ON RAMP			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound	
PEAK HOUR	Left	Thru	Right	Rgt Ramp	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	0	n/a	0	0	n/a	n/a	n/a	0	206	n/a	n/a	0	166
(PM)	0	n/a	0	0	n/a	n/a	n/a	0	165	n/a	n/a	0	182

5: I-285 Southbound Ramps at Paces Ferry Road

	I-285 SB ON RAMP			I-285 SB EXIT RAMP Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	n/a	n/a	206	n/a	0	n/a	0	0	0	0	n/a
(PM)	n/a	n/a	n/a	165	n/a	0	n/a	0	0	0	0	n/a

6: Cumberland Boulevard at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			CUMBERLAND BOULEVARD Eastbound			CUMBERLAND BOULEVARD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	35	0	35	0	0	0	0	0	43	43	0	0
(PM)	38	0	38	0	0	0	0	0	35	35	0	0

7: Vinings Atlanta Driveway #1 at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #1 Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	4	222	292	0	n/a	n/a	n/a	n/a	187	n/a	231
(PM)	n/a	5	178	234	0	n/a	n/a	n/a	n/a	206	n/a	253

8: Vinings Atlanta Driveway #2 at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #2 Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	222	11	n/a	187	n/a	n/a	n/a	n/a	n/a	n/a	4
(PM)	n/a	178	9	n/a	206	n/a	n/a	n/a	n/a	n/a	n/a	5

9: Vinings Atlanta Driveway #3 at Paces Walk

	VININGS ATL DWY #3 Northbound			Southbound			PACES WALK Eastbound			PACES WALK Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	13	n/a	0	n/a	n/a	n/a	n/a	0	16	0	0	n/a
(PM)	14	n/a	0	n/a	n/a	n/a	n/a	0	13	0	0	n/a

Note: Highlighted trips represent exiting trips.

Vinings Atlanta Study Network: 2019 "Build" Traffic

1: Atlanta Road at Cumberland Parkway

	ATLANTA ROAD Northbound			ATLANTA ROAD Southbound			CUMBERLAND PARKWAY Eastbound			CUMBERLAND PARKWAY Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	502	447	171	176	684	173	565	1284	1230	229	235	152
(PM)	1120	959	178	103	676	318	218	403	497	355	1086	154

2: Paces Walk at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			BROOKDALE VININGS Eastbound			PACES WALK/NORTH Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	2	1617	1	60	605	2	1	0	1	11	0	195
(PM)	0	915	7	191	1835	5	2	0	5	16	0	73

3: Paces Ferry Road at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	618	1059	345	75	283	176	578	819	584	154	409	91
(PM)	514	482	198	110	914	414	224	493	714	488	956	92

4: I-285 Northbound Ramps at Paces Ferry Road

	I-285 NB EXIT RAMP Northbound				I-285 NB ON RAMP			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Rgt Ramp	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	250	n/a	265	63	n/a	n/a	n/a	673	1808	n/a	n/a	630	565
(PM)	260	n/a	280	170	n/a	n/a	n/a	830	1102	n/a	n/a	1022	787

5: I-285 Southbound Ramps at Paces Ferry Road

	I-285 SB ON RAMP			I-285 SB EXIT RAMP Southbound			PACES FERRY ROAD Eastbound			PACES FERRY ROAD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	n/a	n/a	884	n/a	1315	n/a	1619	378	232	642	n/a
(PM)	n/a	n/a	n/a	555	n/a	686	n/a	1366	470	482	1026	n/a

6: Cumberland Boulevard at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			CUMBERLAND BOULEVARD Eastbound			CUMBERLAND BOULEVARD Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	374	93	1338	2	25	13	50	497	328	320	95	7
(PM)	363	128	640	31	322	147	130	193	460	1175	555	19

7: Vinings Atlanta Driveway #1 at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #1 Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	1351	222	292	361	n/a	n/a	n/a	n/a	187	n/a	231
(PM)	n/a	670	178	234	1589	n/a	n/a	n/a	n/a	206	n/a	253

8: Vinings Atlanta Driveway #2 at Cumberland Parkway

	CUMBERLAND PARKWAY Northbound			CUMBERLAND PARKWAY Southbound			Eastbound			VININGS ATL DWY #2 Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	n/a	1568	11	n/a	549	n/a	n/a	n/a	n/a	n/a	n/a	4
(PM)	n/a	843	9	n/a	1794	n/a	n/a	n/a	n/a	n/a	n/a	5

9: Vinings Atlanta Driveway #3 at Paces Walk

	VININGS ATL DWY #3 Northbound			Southbound			PACES WALK Eastbound			PACES WALK Westbound		
PEAK HOUR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM	13	n/a	0	n/a	n/a	n/a	n/a	45	16	0	193	n/a
(PM)	14	n/a	0	n/a	n/a	n/a	n/a	186	13	0	74	n/a

Programmed EPAC Data

8/29/2016
7:25:55AM

Intersection Name: Atlanta Rd & Cumberland **Intersection Alias: 278**

Access Code: 9999 Channel: Address: 1 Revision: 3.32g
IP: 10.101.36.81

Access Data

:1200 Baud
:19200 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	5	4.0	15	20	5.0	3.0
2	15	5.0	50	70	5.0	3.0
3	5	2.0	15	20	4.5	3.0
4	6	3.0	40	60	5.0	2.5
5	5	2.0	15	20	4.5	3.0
6	15	5.0	50	70	5.0	3.0
7	5	2.0	15	20	4.0	3.0
8	6	3.0	40	60	5.0	2.5

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	Min_Gap
0.0	0	0	0	0	0.0
2.0	20	20	0	15	3.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
2.0	20	20	0	15	3.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Ped Clear	Actuated Rest in Walk
1	0	0	No	0	No
2	4	40	No	0	No
3	0	0	No	0	No
4	4	23	No	0	No
5	0	0	No	0	No
6	4	20	No	0	No
7	0	0	No	0	No
8	4	30	No	0	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Inactive	None	None	None	0
Green	NonActI	Min	None	0
Inactive	None	None	None	0
Inactive	None	None	None	0
Inactive	None	None	None	0
Green	NonActI	Min	None	0
Inactive	None	None	None	0
Inactive	None	None	None	0

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	No	No	No	Yes
No	No	No	No	No
Yes	No	No	No	Yes
Yes	Yes	No	No	Yes
Yes	No	No	No	Yes
No	No	No	No	No
Yes	No	No	No	Yes
Yes	Yes	No	No	Yes

Special Sequence

Default Data

Vehical Detector Phase Assignment

	Assigned Phase	Mode	Switched Phase	Extend	Delay
Vehical Detector Channel :3	2	Veh	0	0.0	0
Vehical Detector Channel :4	2	Veh	0	0.0	0
Vehical Detector Channel :5	2	Veh	0	0.0	0
Vehical Detector Channel :6	2	Veh	0	0.0	0
Vehical Detector Channel :7	2	Veh	0	0.0	0
Vehical Detector Channel :9	3	Veh	0	0.0	0
Vehical Detector Channel :11	4	Veh	0	0.0	0
Vehical Detector Channel :12	4	Veh	0	0.0	0
Vehical Detector Channel :13	4	Veh	0	0.0	0
Vehical Detector Channel :14	4	Veh	0	0.0	0
Vehical Detector Channel :15	4	Veh	0	0.0	0
Vehical Detector Channel :17	1	Veh	0	0.0	0
Vehical Detector Channel :18	3	Veh	0	0.0	0
Vehical Detector Channel :19	5	Veh	0	0.0	0
Vehical Detector Channel :21	6	Veh	0	0.0	0
Vehical Detector Channel :22	6	Veh	0	0.0	0
Vehical Detector Channel :23	6	Veh	0	0.0	0
Vehical Detector Channel :24	6	Veh	0	0.0	0
Vehical Detector Channel :25	6	Veh	0	0.0	0
Vehical Detector Channel :29	7	Veh	0	0.0	0
Vehical Detector Channel :31	8	Veh	0	0.0	0
Vehical Detector Channel :32	8	Veh	0	0.0	0
Vehical Detector Channel :33	8	Veh	0	0.0	0
Vehical Detector Channel :34	8	Veh	0	0.0	0
Vehical Detector Channel :35	8	Veh	0	0.0	0
Vehical Detector Channel :37	5	Veh	0	0.0	0
Vehical Detector Channel :38	7	Veh	0	0.0	0

Pedestrian Detector

Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switched Phase	Extend	Delay
:					

Default Data

Unit Data

General Control

Startup Time: 0sec Startup State: Flash Red Revert: 4.0sec

Auto Ped Clear: Yes Stop Time Reset: No Alternate Sequence: 0

ABC connector Input Modes: 0

ABC connector Output Modes: 0

D connector Input Modes: 0

D connector Output Modes: 0

Ring	Input Response	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

Overlaps

Overlaps

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow	4.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Stop Grn/Yel Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Strat Green Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Message
		40

Default Data

Control	Channel	Hardware Pins	Control	Channel	Hardware Pins
1 - Veh Phase 1	1	1 - Phase 1 RYG	2 - Veh Phase 2	2	2 - Phase 2 RYG
3 - Veh Phase 3	3	3 - Phase 3 RYG	4 - Veh Phase 4	4	4 - Phase 4 RYG
5 - Veh Phase 5	5	5 - Phase 5 RYG	6 - Veh Phase 6	6	6 - Phase 6 RYG
7 - Veh Phase 7	7	7 - Phase 7 RYG	8 - Veh Phase 8	8	8 - Phase 8 RYG
18 - Ped Phase 2	9	10 - Phase 2 DPW	20 - Ped Phase 4	10	12 - Phase 4 DPW
22 - Ped Phase 6	11	14 - Phase 6 DPW	24 - Ped Phase 8	12	16 - Phase 8 DPW
33 - Overlap A	13	17 - Overlap A RYG	34 - Overlap B	14	18 - Overlap B RYG
35 - Overlap C	15	19 - Overlap C RYG	36 - Overlap D	16	20 - Overlap D RYG
0 - None	17	9 - Phase 1 DPW	0 - None	18	11 - Phase 3 DPW
0 - None	19	13 - Phase 5 DPW	0 - None	20	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto

Coordination Mode: 2=Permissive Yield

Maximun Mode: 0=Inhibit

Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn

Force Mode: 0=Plan

Max Dwell Time: 0

Yield Period: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	170
1/2	140
1/3	170
1/4	130
2/1	140
2/2	150
2/3	130
3/1	130
3/2	150
4/1	170

Split Times and Phase Modes

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	28	0=Actuated	2	49	1=Coordinate	3	33	0=Actuated	4	60	7=Dual Coord
5	28	0=Actuated	6	49	1=Coordinate	7	17	0=Actuated	8	76	7=Dual Coord

Dial 1 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	40	0=Actuated	2	38	1=Coordinate	3	22	0=Actuated	4	40	7=Dual Coord
5	20	0=Actuated	6	58	1=Coordinate	7	20	0=Actuated	8	42	7=Dual Coord

Dial 1 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	63	0=Actuated	2	34	1=Coordinate	3	20	0=Actuated	4	53	7=Dual Coord
5	20	0=Actuated	6	77	1=Coordinate	7	23	0=Actuated	8	50	7=Dual Coord

Dial 1 / Split 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	31	0=Actuated	2	42	1=Coordinate	3	16	0=Actuated	4	41	7=Dual Coord
5	16	0=Actuated	6	57	1=Coordinate	7	15	0=Actuated	8	42	7=Dual Coord

Dial 2 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	40	0=Actuated	2	38	1=Coordinate	3	22	0=Actuated	4	40	7=Dual Coord
5	20	0=Actuated	6	58	1=Coordinate	7	20	0=Actuated	8	42	7=Dual Coord

Dial 2 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	30	0=Actuated	2	46	1=Coordinate	3	29	0=Actuated	4	45	7=Dual Coord
5	19	0=Actuated	6	57	1=Coordinate	7	22	0=Actuated	8	52	7=Dual Coord

Dial 2 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	21	0=Actuated	2	52	1=Coordinate	3	16	0=Actuated	4	41	7=Dual Coord
5	16	0=Actuated	6	57	1=Coordinate	7	15	0=Actuated	8	42	7=Dual Coord

Dial 3 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	26	0=Actuated	2	40	1=Coordinate	3	25	0=Actuated	4	39	7=Dual Coord
5	17	0=Actuated	6	49	1=Coordinate	7	20	0=Actuated	8	44	7=Dual Coord

Dial 3 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	30	0=Actuated	2	46	1=Coordinate	3	29	0=Actuated	4	45	7=Dual Coord
5	19	0=Actuated	6	57	1=Coordinate	7	22	0=Actuated	8	52	7=Dual Coord

Dial 4 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	25	0=Actuated	2	61	1=Coordinate	3	20	0=Actuated	4	64	3=Max Recall
5	25	0=Actuated	6	61	1=Coordinate	7	20	0=Actuated	8	64	3=Max Recall

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 9	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/2/1**	Offset Time: 118	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/3/1**	Offset Time: 30	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/4/1**	Offset Time: 3	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **2/1/1**	Offset Time: 118	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **2/2/1**	Offset Time: 83	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **2/3/1**	Offset Time: 3	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **3/1/1**	Offset Time: 49	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **3/2/1**	Offset Time: 83	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **4/1/1**	Offset Time: 87	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 1 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4																	
2	1	8:0	2/1/1																	
3	1	20:0	0/0/4																	
4	2	0:1	0/0/4																	
5	2	6:0	1/1/1																	
6	2	10:0	1/2/1																	
7	2	15:0	1/3/1																	
8	2	20:0	1/4/1																	
9	2	22:0	0/0/4																	

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
1	1	0	1					X										
2	2	0	1					X										

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Flash > Preepmt 1, Preepmt 1 > Preempt 2, Preepmt 2 > Preempt 3, Preepmt 3 > Preempt 4, Preepmt 4 > Preempt 5, Preepmt 5 > Preempt 6

Ring 1 Min GRN/WLK = 10 Ring 2 Min GRN/WLK = 10 Ring 3 Min GRN/WLK = 10 Ring 4 Min GRN/WLK = 10

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select			Track				Dwell	Return		
								Ped Clear	Yel	Red	Grn	Ped	Yel	Red	Green	Ped Clear	Yel	Red
1	No	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20
2	No	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20
3	No	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20
4	No	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20
5	No	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20
6	No	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20

Preempt 1

Phase	Exit Phase	Exit Calls

Preempt 2

Phase	Exit Phase	Exit Calls

Preempt 3

Phase	Exit Phase	Exit Calls

Preempt 4

Phase	Exit Phase	Exit Calls

Preempt 5

Phase	Exit Phase	Exit Calls

Preempt 6

Phase	Exit Phase	Exit Calls

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Red	Red	No
2	Red	Red	No
3	Red	Red	No
4	Red	Red	No
5	Red	Red	No
6	Red	Red	No
7	Red	Red	No
8	Red	Red	No
9	Red	Red	No
10	Red	Red	No
11	Red	Red	No
12	Red	Red	No
13	Red	Red	No
14	Red	Red	No
15	Red	Red	No
16	Red	Red	No

Pedestrian Phases

Ph	Track	Dwell	Cycle
1	Don't Walk	Don't Walk	No
2	Don't Walk	Don't Walk	No
3	Don't Walk	Don't Walk	No
4	Don't Walk	Don't Walk	No
5	Don't Walk	Don't Walk	No
6	Don't Walk	Don't Walk	No
7	Don't Walk	Don't Walk	No
8	Don't Walk	Don't Walk	No
9	Don't Walk	Don't Walk	No
10	Don't Walk	Don't Walk	No
11	Don't Walk	Don't Walk	No
12	Don't Walk	Don't Walk	No
13	Don't Walk	Don't Walk	No
14	Don't Walk	Don't Walk	No
15	Don't Walk	Don't Walk	No
16	Don't Walk	Don't Walk	No

Overlaps

Ovlp	Track	Dwell	Cycle
A	Red	Red	No
B	Red	Red	No
C	Red	Red	No
D	Red	Red	No
E	Red	Red	No
F	Red	Red	No
G	Red	Red	No
H	Red	Red	No
I	Red	Red	No
J	Red	Red	No
K	Red	Red	No
L	Red	Red	No
M	Red	Red	No
N	Red	Red	No
O	Red	Red	No
P	Red	Red	No

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Red	Red	No
2	Red	Red	No
3	Red	Red	No
4	Red	Red	No
5	Red	Red	No
6	Red	Red	No
7	Red	Red	No
8	Red	Red	No
9	Red	Red	No
10	Red	Red	No
11	Red	Red	No
12	Red	Red	No
13	Red	Red	No
14	Red	Red	No
15	Red	Red	No
16	Red	Red	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle
1	Don't Walk	Don't Walk	No
2	Don't Walk	Don't Walk	No
3	Don't Walk	Don't Walk	No
4	Don't Walk	Don't Walk	No
5	Don't Walk	Don't Walk	No
6	Don't Walk	Don't Walk	No
7	Don't Walk	Don't Walk	No
8	Don't Walk	Don't Walk	No
9	Don't Walk	Don't Walk	No
10	Don't Walk	Don't Walk	No
11	Don't Walk	Don't Walk	No
12	Don't Walk	Don't Walk	No
13	Don't Walk	Don't Walk	No
14	Don't Walk	Don't Walk	No
15	Don't Walk	Don't Walk	No
16	Don't Walk	Don't Walk	No

Overlaps

Ovlp.	Track	Dwell	Cycle
A	Red	Red	No
B	Red	Red	No
C	Red	Red	No
D	Red	Red	No
E	Red	Red	No
F	Red	Red	No
G	Red	Red	No
H	Red	Red	No
I	Red	Red	No
J	Red	Red	No
K	Red	Red	No
L	Red	Red	No
M	Red	Red	No
N	Red	Red	No
O	Red	Red	No
P	Red	Red	No

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Red	Red	No
2	Red	Red	No
3	Red	Red	No
4	Red	Red	No
5	Red	Red	No
6	Red	Red	No
7	Red	Red	No
8	Red	Red	No
9	Red	Red	No
10	Red	Red	No
11	Red	Red	No
12	Red	Red	No
13	Red	Red	No
14	Red	Red	No
15	Red	Red	No
16	Red	Red	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle
1	Don't Walk	Don't Walk	No
2	Don't Walk	Don't Walk	No
3	Don't Walk	Don't Walk	No
4	Don't Walk	Don't Walk	No
5	Don't Walk	Don't Walk	No
6	Don't Walk	Don't Walk	No
7	Don't Walk	Don't Walk	No
8	Don't Walk	Don't Walk	No
9	Don't Walk	Don't Walk	No
10	Don't Walk	Don't Walk	No
11	Don't Walk	Don't Walk	No
12	Don't Walk	Don't Walk	No
13	Don't Walk	Don't Walk	No
14	Don't Walk	Don't Walk	No
15	Don't Walk	Don't Walk	No
16	Don't Walk	Don't Walk	No

Overlaps

Ovlp.	Track	Dwell	Cycle
A	Red	Red	No
B	Red	Red	No
C	Red	Red	No
D	Red	Red	No
E	Red	Red	No
F	Red	Red	No
G	Red	Red	No
H	Red	Red	No
I	Red	Red	No
J	Red	Red	No
K	Red	Red	No
L	Red	Red	No
M	Red	Red	No
N	Red	Red	No
O	Red	Red	No
P	Red	Red	No

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Red	Red	No
2	Red	Red	No
3	Red	Red	No
4	Red	Red	No
5	Red	Red	No
6	Red	Red	No
7	Red	Red	No
8	Red	Red	No
9	Red	Red	No
10	Red	Red	No
11	Red	Red	No
12	Red	Red	No
13	Red	Red	No
14	Red	Red	No
15	Red	Red	No
16	Red	Red	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle
1	Don't Walk	Don't Walk	No
2	Don't Walk	Don't Walk	No
3	Don't Walk	Don't Walk	No
4	Don't Walk	Don't Walk	No
5	Don't Walk	Don't Walk	No
6	Don't Walk	Don't Walk	No
7	Don't Walk	Don't Walk	No
8	Don't Walk	Don't Walk	No
9	Don't Walk	Don't Walk	No
10	Don't Walk	Don't Walk	No
11	Don't Walk	Don't Walk	No
12	Don't Walk	Don't Walk	No
13	Don't Walk	Don't Walk	No
14	Don't Walk	Don't Walk	No
15	Don't Walk	Don't Walk	No
16	Don't Walk	Don't Walk	No

Overlaps

Ovlp.	Track	Dwell	Cycle
A	Red	Red	No
B	Red	Red	No
C	Red	Red	No
D	Red	Red	No
E	Red	Red	No
F	Red	Red	No
G	Red	Red	No
H	Red	Red	No
I	Red	Red	No
J	Red	Red	No
K	Red	Red	No
L	Red	Red	No
M	Red	Red	No
N	Red	Red	No
O	Red	Red	No
P	Red	Red	No

Preempt 5

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Red	Red	No
2	Red	Red	No
3	Red	Red	No
4	Red	Red	No
5	Red	Red	No
6	Red	Red	No
7	Red	Red	No
8	Red	Red	No
9	Red	Red	No
10	Red	Red	No
11	Red	Red	No
12	Red	Red	No
13	Red	Red	No
14	Red	Red	No
15	Red	Red	No
16	Red	Red	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle
1	Don't Walk	Don't Walk	No
2	Don't Walk	Don't Walk	No
3	Don't Walk	Don't Walk	No
4	Don't Walk	Don't Walk	No
5	Don't Walk	Don't Walk	No
6	Don't Walk	Don't Walk	No
7	Don't Walk	Don't Walk	No
8	Don't Walk	Don't Walk	No
9	Don't Walk	Don't Walk	No
10	Don't Walk	Don't Walk	No
11	Don't Walk	Don't Walk	No
12	Don't Walk	Don't Walk	No
13	Don't Walk	Don't Walk	No
14	Don't Walk	Don't Walk	No
15	Don't Walk	Don't Walk	No
16	Don't Walk	Don't Walk	No

Overlaps

Ovlp.	Track	Dwell	Cycle
A	Red	Red	No
B	Red	Red	No
C	Red	Red	No
D	Red	Red	No
E	Red	Red	No
F	Red	Red	No
G	Red	Red	No
H	Red	Red	No
I	Red	Red	No
J	Red	Red	No
K	Red	Red	No
L	Red	Red	No
M	Red	Red	No
N	Red	Red	No
O	Red	Red	No
P	Red	Red	No

Preempt 6

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Red	Red	No
2	Red	Red	No
3	Red	Red	No
4	Red	Red	No
5	Red	Red	No
6	Red	Red	No
7	Red	Red	No
8	Red	Red	No
9	Red	Red	No
10	Red	Red	No
11	Red	Red	No
12	Red	Red	No
13	Red	Red	No
14	Red	Red	No
15	Red	Red	No
16	Red	Red	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle
1	Don't Walk	Don't Walk	No
2	Don't Walk	Don't Walk	No
3	Don't Walk	Don't Walk	No
4	Don't Walk	Don't Walk	No
5	Don't Walk	Don't Walk	No
6	Don't Walk	Don't Walk	No
7	Don't Walk	Don't Walk	No
8	Don't Walk	Don't Walk	No
9	Don't Walk	Don't Walk	No
10	Don't Walk	Don't Walk	No
11	Don't Walk	Don't Walk	No
12	Don't Walk	Don't Walk	No
13	Don't Walk	Don't Walk	No
14	Don't Walk	Don't Walk	No
15	Don't Walk	Don't Walk	No
16	Don't Walk	Don't Walk	No

Overlaps

Ovlp.	Track	Dwell	Cycle
A	Red	Red	No
B	Red	Red	No
C	Red	Red	No
D	Red	Red	No
E	Red	Red	No
F	Red	Red	No
G	Red	Red	No
H	Red	Red	No
I	Red	Red	No
J	Red	Red	No
K	Red	Red	No
L	Red	Red	No
M	Red	Red	No
N	Red	Red	No
O	Red	Red	No
P	Red	Red	No

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15

1st Phone:

2nd Phone:

Cycle Failure: No
Local Free: No
Coord Failure: No
Conflict Flash: Yes
Remote Flash: No

Local Fash: Yes
Cycle Fault: No
Coord Fault: No
Premption: No
Voltage Monitor: Yes

Special Status 1: No
Special Status 2: No
Special Status 3: No
Special Status 4: No
Special Status 5: No
Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Veh/Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor
1	2	20	15	10	20	1	1	100	1	2	100
2	6	20	15	10	20						

Sample Interval: 15

Queue: 1
Input Selection: 0=Average
Detector Failed Level : 0

Queue: 2
Input Selection: 0=Average
Detector Failed Level : 0

Queue: 1

Level	Enter	Leave	Dial / Split / Offset
1	60	45	1 / 1 / 1
2	60	45	1 / 1 / 1

Queue: 2

Level	Enter	Leave	Dial / Split / Offset
1	60	45	1 / 3 / 1
2	60	45	1 / 3 / 1

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1	Detector_2	Distance :

Speed Trap Low Treshold	Speed Trap High Treshold

Dial/Split/Offset

//

Default Data

Default Data

Volume Detector Data

Report Interval 15

Volume Detector Number	Controller Detector Channel
1	1
2	3
3	4
4	5
5	6
6	7
7	9
8	11
9	12
10	13
11	14
12	15
13	19
14	21
15	22
16	23
17	24
18	25
19	29
20	31
21	32
22	33
23	34
24	35

TIMESETTINGS FOR INTERSECTION 109

---------- Stage Times ----------

STG	MAX2	LST	MIN	INC	MVG	MAX	ECG	AMB	RED	SRED
A	0.0	0.0	14.0	0.0	0.0	50.0	0.0	4.0	4.0	0.0
B	0.0	0.0	5.0	0.0	0.0	20.0	0.0	3.5	3.5	0.0
C	0.0	0.0	6.0	0.0	0.0	25.0	0.0	4.5	2.5	0.0
D	0.0	0.0	5.0	0.0	0.0	35.0	0.0	3.5	4.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

---------- Approach Times ----------

STG	G1	H1	W1	G2	H2	W2	G3	H3	W3	G4	H4	W4
A	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
B	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
C	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
D	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
E	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
F	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
G	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0

--- Pedestrian Times --

PED	DLY	WLK	CLR1	CLR2
1	0.0	6.0	8.0	3.0
2	0.0	4.0	26.0	2.0
3	0.0	6.0	8.0	3.0
4	0.0	4.0	28.0	0.0
5	0.0	6.0	8.0	3.0
6	0.0	4.0	24.0	2.0
7	0.0	6.0	8.0	3.0
8	0.0	6.0	8.0	3.0

- Daily Times -

START	FINISH
08:00	16:00

---------- Presence Times ----------

1	2	3	4	5	6	7	8	9	10	11	12
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0

13	14	15	16	17	18	19	20	21	22	23	24
0.0	10.0	0.0	0.0	5.0	8.0	10.0	0.0	0.0	0.0	0.0	0.0

---------- Special Times ----------

1	2	3	4	5	6	7	8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

9	10	11	12	13	14	15	16
4.0	120.0	5.0	5.0	0.0	0.0	10.0	120.0

17	18	19	20	21	22	23	24
3.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0

25	26	27	28	29	30	31	32
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	34	35	36	37	38	39	40
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

---------- Plan data ----------

Plan	CL	A	B	C	D	E	F	G	R-	R+	Y-	Y+	Z-	Z+	Q-	Q+	XSF
0	0	0	0	0	0	0	0	0	CT	CT	NU	NU	NU	NU	CT	CT	0
1	100	0	35	65	80	0	0	0	NU	CT	62	NU	NU	NU	CT	CT	0
2	130	0	48	81	105	0	0	0	NU	CT	73	NU	NU	NU	CT	CT	0
3	100	0	35	56	78	0	0	0	NU	CT	69	NU	NU	NU	CT	CT	0
4	140	0	50	89	110	0	0	0	NU	CT	115	NU	NU	NU	CT	CT	0
5	100	0	35	65	80	0	0	0	NU	CT	95	NU	NU	NU	CT	CT	0
6	140	0	52	78	110	0	0	0	NU	CT	1	NU	NU	NU	CT	CT	0
7	140	0	53	76	107	0	0	0	NU	CT	13	NU	NU	NU	CT	CT	0
8	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
9	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
10	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0

---------- Schedule data ----------

Sched	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Day	14	8	8	8	8	8	8	13	13	13	8	0	0	0	0	0	0	0	0	0
Hour	0	6	9	11	15	17	19	8	11	23	22	0	0	0	0	0	0	0	0	0
Min.	0	30	30	30	0	30	30	30	30	0	30	0	0	0	0	0	0	0	0	0
Plan	0	4	5	2	6	7	3	1	2	0	0	0	0	0	0	0	0	0	0	0

Checksum = $90

```
*****************************************************************
*Plan data:                                                     *
*       Y- is offset                                            *
*                                                               *
*Schedule data:                                                 *
*       Day-of-week code numbers                                *
*       0  = End of schedules                                   *
*       1  = Sunday                                             *
*       2  = Monday                                             *
*       3  = Tuesday                                            *
*       4  = Wednesday                                          *
*       5  = Thursday                                           *
*       6  = Friday                                             *
*       7  = Saturday                                           *
*       8  = Monday-Friday                                      *
*       9  = Monday-Saturday                                    *
*       10 = Tuesday, Wednesday and Thursday                    *
*       11 = Monday and Friday                                  *
*       12 = Monday, Friday and Saturday                        *
*       13 = Saturday and Sunday                                *
*       14 = Every day                                          *
*       15 = Never, i.e. a dummy value for schedules not in use*
*****************************************************************
```

TIMESETTINGS FOR INTERSECTION 269

Stage Times

STG	MAX2	LST	MIN	INC	MVG	MAX	ECG	AMB	RED	SRED
A	0.0	0.0	14.0	0.0	0.0	70.0	0.0	5.0	3.0	3.0
B	0.0	0.0	5.0	0.0	0.0	45.0	0.0	5.0	3.0	3.0
C	0.0	0.0	5.0	0.0	0.0	5.0	0.0	5.0	2.5	1.5
D	0.0	0.0	8.0	0.0	0.0	30.0	0.0	5.0	2.5	2.5
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Approach Times

STG	G1	H1	W1	G2	H2	W2	G3	H3	W3	G4	H4	W4
A	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
B	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
C	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
D	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
E	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
F	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
G	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0

Pedestrian Times

PED	DLY	WLK	CLR1	CLR2
1	0.0	6.0	8.0	3.0
2	0.0	4.0	8.0	0.0
3	0.0	6.0	8.0	3.0
4	0.0	4.0	5.0	0.0
5	0.0	6.0	8.0	3.0
6	0.0	4.0	20.0	0.0
7	0.0	6.0	8.0	3.0
8	0.0	6.0	8.0	3.0

Daily Times

START	FINISH
08:00	18:00

Presence Times

1	2	3	4	5	6	7	8	9	10	11	12
3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

13	14	15	16	17	18	19	20	21	22	23	24
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Special Times

1	2	3	4	5	6	7	8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

9	10	11	12	13	14	15	16
0.0	120.0	5.0	5.0	0.0	0.0	10.0	120.0

17	18	19	20	21	22	23	24
2.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0

25	26	27	28	29	30	31	32
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	34	35	36	37	38	39	40
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan data

Plan	CL	A	B	C	D	E	F	G	R-	R+	Y-	Y+	Z-	Z+	Q-	Q+	XSF
0	0	0	0	0	0	0	0	0	CT	CT	NU	NU	NU	NU	CT	CT	0

269 - Paces Ferry Rd & I-285NB.txt

1	100	0	37	72	83	0	0	0	NU	CT	94	NU	NU	NU	CT	CT	0
2	130	0	68	102	113	0	0	0	NU	CT	35	NU	NU	NU	CT	CT	0
3	100	0	45	72	83	0	0	0	NU	CT	0	NU	NU	NU	CT	CT	0
4	140	0	61	111	122	0	0	0	NU	CT	110	NU	NU	NU	CT	CT	0
5	100	0	35	72	83	0	0	0	NU	CT	20	NU	NU	NU	CT	CT	0
6	140	0	72	112	123	0	0	0	NU	CT	12	NU	NU	NU	CT	CT	0
7	140	0	75	105	116	0	0	0	NU	CT	23	NU	NU	NU	CT	CT	0
8	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
9	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
10	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0

Schedule data

Sched	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Day	14	8	8	8	8	8	8	13	13	13	13	8	0	0	0	0	0	0	0	0
Hour	0	6	9	11	15	17	19	8	11	20	23	22	0	0	0	0	0	0	0	0
Min.	0	30	30	30	0	30	30	30	30	0	0	30	0	0	0	0	0	0	0	0
Plan	0	4	5	2	6	7	3	1	2	3	0	0	0	0	0	0	0	0	0	0

Checksum = $2E

```
*****************************************************************
*Plan data:                                                     *
*       Y- is offset                                            *
*                                                               *
*Schedule data:                                                 *
*       Day-of-week code numbers                                *
*       0  = End of schedules                                   *
*       1  = Sunday                                             *
*       2  = Monday                                             *
*       3  = Tuesday                                            *
*       4  = Wednesday                                          *
*       5  = Thursday                                           *
*       6  = Friday                                             *
*       7  = Saturday                                           *
*       8  = Monday-Friday                                      *
*       9  = Monday-Saturday                                    *
*       10 = Tuesday, Wednesday and Thursday                    *
*       11 = Monday and Friday                                  *
*       12 = Monday, Friday and Saturday                        *
*       13 = Saturday and Sunday                                *
*       14 = Every day                                          *
*       15 = Never, i.e. a dummy value for schedules not in use*
*****************************************************************
```

TIMESETTINGS FOR INTERSECTION 110

Stage Times

STG	MAX2	LST	MIN	INC	MVG	MAX	ECG	AMB	RED	SRED
A	0.0	0.0	14.0	0.0	0.0	70.0	0.0	4.5	3.5	0.0
B	0.0	0.0	6.0	0.0	0.0	25.0	0.0	5.0	2.5	0.0
C	0.0	0.0	5.0	0.0	0.0	45.0	0.0	4.0	3.0	0.0
D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Approach Times

STG	G1	H1	W1	G2	H2	W2	G3	H3	W3	G4	H4	W4
A	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
B	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
C	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
D	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
E	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
F	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
G	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0

Pedestrian Times

PED	DLY	WLK	CLR1	CLR2
1	0.0	6.0	8.0	3.0
2	0.0	4.0	12.0	0.0
3	0.0	6.0	8.0	3.0
4	0.0	4.0	8.0	0.0
5	0.0	6.0	8.0	3.0
6	0.0	4.0	12.0	0.0
7	0.0	6.0	8.0	3.0
8	0.0	4.0	15.0	0.0

Daily Times

START	FINISH
08:00	18:00

Presence Times

1	2	3	4	5	6	7	8	9	10	11	12
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

13	14	15	16	17	18	19	20	21	22	23	24
0.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Special Times

1	2	3	4	5	6	7	8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

9	10	11	12	13	14	15	16
4.0	120.0	5.0	5.0	0.0	0.0	10.0	120.0

17	18	19	20	21	22	23	24
2.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0

25	26	27	28	29	30	31	32
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	34	35	36	37	38	39	40
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan data

Plan	CL	A	B	C	D	E	F	G	R-	R+	Y-	Y+	Z-	Z+	Q-	Q+	XSF
0	0	0	0	0	0	0	0	0	CT	CT	NU	NU	NU	NU	CT	CT	0

1	100	0	50	80	0	0	0	0	NU	CT	97	NU	NU	NU	CT	NU	0
2	130	0	60	100	0	0	0	0	NU	CT	47	NU	NU	NU	CT	NU	0
3	100	0	45	75	0	0	0	0	NU	CT	13	NU	NU	NU	CT	NU	0
4	140	0	62	119	0	0	0	0	NU	CT	48	NU	NU	NU	CT	NU	0
5	100	0	40	75	0	0	0	0	NU	CT	25	NU	NU	NU	CT	NU	0
6	140	0	50	100	0	0	0	0	NU	CT	112	NU	NU	NU	CT	NU	0
7	140	0	45	105	0	0	0	0	NU	CT	23	NU	NU	NU	CT	NU	0
8	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
9	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
10	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0

Schedule data

Sched	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Day	14	8	8	8	8	8	8	13	13	13	13	8	0	0	0	0	0	0	0	0
Hour	0	6	9	11	15	17	19	8	11	20	23	22	0	0	0	0	0	0	0	0
Min.	0	30	30	30	0	30	30	30	30	0	0	30	0	0	0	0	0	0	0	0
Plan	0	4	5	2	6	7	3	1	2	3	0	0	0	0	0	0	0	0	0	0

Checksum = $E6

```
*****************************************************************
*Plan data:                                                     *
*       Y- is offset                                            *
*                                                               *
*Schedule data:                                                 *
*       Day-of-week code numbers                                *
*       0  = End of schedules                                   *
*       1  = Sunday                                             *
*       2  = Monday                                             *
*       3  = Tuesday                                            *
*       4  = Wednesday                                          *
*       5  = Thursday                                           *
*       6  = Friday                                             *
*       7  = Saturday                                           *
*       8  = Monday-Friday                                      *
*       9  = Monday-Saturday                                    *
*       10 = Tuesday, Wednesday and Thursday                    *
*       11 = Monday and Friday                                  *
*       12 = Monday, Friday and Saturday                        *
*       13 = Saturday and Sunday                                *
*       14 = Every day                                          *
*       15 = Never, i.e. a dummy value for schedules not in use*
*****************************************************************
```

TIMESETTINGS FOR INTERSECTION 60

Stage Times

STG	MAX2	LST	MIN	INC	MVG	MAX	ECG	AMB	RED	SRED
A	0.0	0.0	15.0	0.0	0.0	40.0	0.0	4.5	2.5	0.0
B	0.0	0.0	8.0	0.0	0.0	35.0	0.0	4.5	2.5	0.0
C	0.0	0.0	15.0	0.0	0.0	40.0	0.0	4.5	2.5	0.0
D	0.0	0.0	8.0	0.0	0.0	35.0	0.0	4.5	2.5	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Approach Times

STG	G1	H1	W1	G2	H2	W2	G3	H3	W3	G4	H4	W4
A	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
B	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
C	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
D	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
E	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
F	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0
G	3.0	0.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0	3.0	1.0	6.0

Pedestrian Times

PED	DLY	WLK	CLR1	CLR2
1	0.0	0.0	0.0	0.0
2	0.0	4.0	23.0	0.0
3	0.0	0.0	0.0	0.0
4	0.0	4.0	20.0	0.0
5	0.0	0.0	0.0	0.0
6	0.0	4.0	28.0	0.0
7	0.0	0.0	0.0	0.0
8	0.0	4.0	23.0	0.0

Daily Times

START	FINISH
08:00	18:00

Presence Times

1	2	3	4	5	6	7	8	9	10	11	12
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

13	14	15	16	17	18	19	20	21	22	23	24
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Special Times

1	2	3	4	5	6	7	8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

9	10	11	12	13	14	15	16
0.0	120.0	5.0	5.0	0.0	0.0	10.0	120.0

17	18	19	20	21	22	23	24
0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0

25	26	27	28	29	30	31	32
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	34	35	36	37	38	39	40
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan data

Plan	CL	A	B	C	D	E	F	G	R-	R+	Y-	Y+	Z-	Z+	Q-	Q+	XSF
0	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0

1	160	0	35	77	125	0	0	0	NU	NU	17	NU	NU	NU	NU	NU	0
2	160	0	43	85	125	0	0	0	NU	NU	92	NU	NU	NU	NU	NU	0
3	160	0	53	94	130	0	0	0	NU	NU	29	NU	NU	NU	NU	NU	0
4	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
5	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
6	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
7	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
8	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
9	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0
10	0	0	0	0	0	0	0	0	NU	NU	NU	NU	NU	NU	NU	NU	0

Schedule data

Sched	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Day	14	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour	0	7	9	11	16	18	20	0	0	0	0	0	0	0	0	0	0	0	0	0
Min.	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plan	0	1	0	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Checksum = $4A

```
*****************************************************************
*Plan data:                                                     *
*       Y- is offset                                            *
*                                                               *
*Schedule data:                                                 *
*       Day-of-week code numbers                                *
*       0  = End of schedules                                   *
*       1  = Sunday                                             *
*       2  = Monday                                             *
*       3  = Tuesday                                            *
*       4  = Wednesday                                          *
*       5  = Thursday                                           *
*       6  = Friday                                             *
*       7  = Saturday                                           *
*       8  = Monday-Friday                                      *
*       9  = Monday-Saturday                                    *
*       10 = Tuesday, Wednesday and Thursday                    *
*       11 = Monday and Friday                                  *
*       12 = Monday, Friday and Saturday                        *
*       13 = Saturday and Sunday                                *
*       14 = Every day                                          *
*       15 = Never, i.e. a dummy value for schedules not in use*
*****************************************************************
```

Appendix D

SYNCHRO CAPACITY ANALYSIS OUTPUTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	10	0	172	2	1303	1	41	295	2
Future Volume (Veh/h)	1	0	1	10	0	172	2	1303	1	41	295	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.50	0.25	0.82	0.50	0.86	0.25	0.68	0.90	0.50
Hourly flow rate (vph)	4	0	4	20	0	210	4	1515	4	60	328	4
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								3.5				
Percent Blockage								0				
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1045	
pX, platoon unblocked												
vC, conflicting volume	1424	1975	167	1816	1977	760	332			1519		
vC1, stage 1 conf vol	448	448		1525	1525							
vC2, stage 2 conf vol	976	1527		291	452							
vCu, unblocked vol	1424	1975	167	1816	1977	760	332			1519		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	100	100	83	100	40	100			87		
cM capacity (veh/h)	48	117	852	121	169	351	1239			445		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	8	230	4	1010	509	60	164	164	4
Volume Left	4	20	4	0	0	60	0	0	0
Volume Right	4	210	0	0	4	0	0	0	4
cSH	92	301	1239	1700	1700	445	1700	1700	1700
Volume to Capacity	0.09	0.76	0.00	0.59	0.30	0.13	0.10	0.10	0.00
Queue Length 95th (ft)	7	146	0	0	0	12	0	0	0
Control Delay (s)	48.1	47.1	7.9	0.0	0.0	14.3	0.0	0.0	0.0
Lane LOS	E	E	A			B			
Approach Delay (s)	48.1	47.1	0.0			2.2			
Approach LOS	E	E							

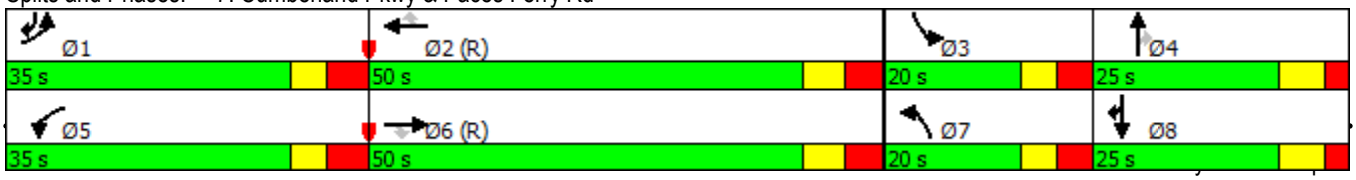
Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	53.9%	ICU Level of Service		A
Analysis Period (min)	15			

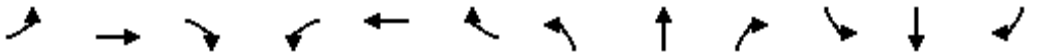
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	545	773	357	130	386	86	427	933	313	71	185	166
Future Volume (vph)	545	773	357	130	386	86	427	933	313	71	185	166
Lane Group Flow (vph)	606	859	406	140	429	104	547	1111	423	76	221	166
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8 1
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	25.0	12.0	25.0	
Total Split (s)	35.0	50.0	50.0	35.0	50.0	50.0	20.0	25.0	25.0	20.0	25.0	
Total Split (%)	26.9%	38.5%	38.5%	26.9%	38.5%	38.5%	15.4%	19.2%	19.2%	15.4%	19.2%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	
v/c Ratio	0.72	0.53	0.43	0.50	0.23	0.15	1.56	1.72	1.00	0.53	0.50	0.15
Control Delay	56.6	27.4	3.7	62.9	29.1	1.5	304.6	361.5	78.3	70.2	55.0	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	27.4	3.7	62.9	29.1	1.5	304.6	361.5	78.3	70.2	55.0	3.9
Queue Length 50th (ft)	173	268	1	59	90	0	~335	~765	~278	62	99	0
Queue Length 95th (ft)	207	345	54	91	126	2	#369	#853	#336	113	147	25
Internal Link Dist (ft)		610			246			250			395	
Turn Bay Length (ft)	455		250	225		100			130	215		300
Base Capacity (vph)	1076	1632	944	719	1901	683	350	647	421	180	443	1230
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.53	0.43	0.19	0.23	0.15	1.56	1.72	1.00	0.42	0.50	0.13

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 115 (88%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	545	773	357	130	386	86	427	933	313	71	185	166
Future Volume (vph)	545	773	357	130	386	86	427	933	313	71	185	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00	1.00	0.86	0.86
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	5090	3610	1599	3400	5136	1583	3502	3610	1599	1805	3170	2778
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	5090	3610	1599	3400	5136	1583	3502	3610	1599	1805	3170	2778
Peak-hour factor, PHF	0.90	0.90	0.88	0.93	0.90	0.83	0.78	0.84	0.74	0.93	0.91	0.90
Adj. Flow (vph)	606	859	406	140	429	104	547	1111	423	76	203	184
RTOR Reduction (vph)	0	0	226	0	0	67	0	0	135	0	4	105
Lane Group Flow (vph)	606	859	180	140	429	37	547	1111	288	76	217	61
Heavy Vehicles (%)	0%	0%	1%	3%	1%	2%	0%	0%	1%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Actuated Green, G (s)	21.4	57.4	57.4	10.7	46.7	46.7	13.0	23.3	23.3	9.1	19.4	47.8
Effective Green, g (s)	21.4	57.4	57.4	10.7	46.7	46.7	13.0	23.3	23.3	9.1	19.4	47.8
Actuated g/C Ratio	0.16	0.44	0.44	0.08	0.36	0.36	0.10	0.18	0.18	0.07	0.15	0.37
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	837	1593	706	279	1845	568	350	647	286	126	473	1021
v/s Ratio Prot	c0.12	c0.24		0.04	0.08		c0.16	c0.31		0.04	0.07	0.02
v/s Ratio Perm			0.11			0.02			0.18			
v/c Ratio	0.72	0.54	0.26	0.50	0.23	0.07	1.56	1.72	1.01	0.60	0.46	0.06
Uniform Delay, d1	51.5	26.6	22.8	57.1	29.1	27.3	58.5	53.4	53.4	58.7	50.5	26.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	1.3	0.9	1.4	0.3	0.2	266.8	329.2	55.4	7.9	3.2	0.0
Delay (s)	54.6	27.9	23.7	58.5	29.4	27.6	325.3	382.6	108.7	66.6	53.7	26.6
Level of Service	D	C	C	E	C	C	F	F	F	E	D	C
Approach Delay (s)		35.7			35.2			311.9			46.1	
Approach LOS		D			D			F			D	

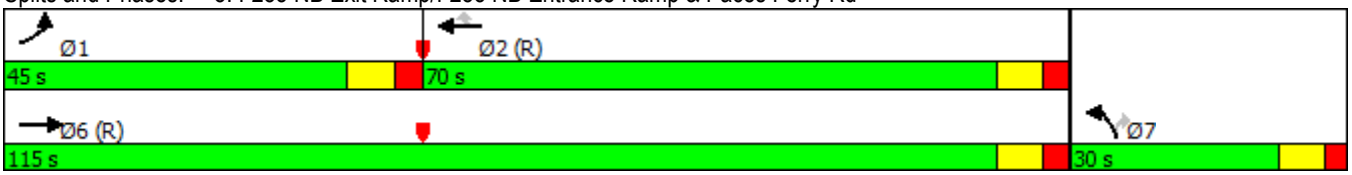
Intersection Summary			
HCM 2000 Control Delay	149.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	635	1512	594	377	236	250
Future Volume (vph)	635	1512	594	377	236	250
Lane Group Flow (vph)	676	1643	691	490	295	287
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.86	0.41	0.18	0.30	0.70	0.67
Control Delay	65.2	6.1	21.7	2.4	70.0	47.3
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	65.2	6.4	21.7	2.4	70.0	47.3
Queue Length 50th (ft)	317	166	88	0	140	98
Queue Length 95th (ft)	378	220	114	8	161	142
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	893	4000	3776	1644	537	519
Starvation Cap Reductn	0	1341	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.62	0.18	0.30	0.55	0.55

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 110 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	635	1512	0	0	594	377	236	0	250	0	0	0
Future Volume (vph)	635	1512	0	0	594	377	236	0	250	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3467		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3467		2814			
Peak-hour factor, PHF	0.94	0.92	0.25	0.25	0.86	0.77	0.80	0.25	0.87	0.25	0.25	0.25
Adj. Flow (vph)	676	1643	0	0	691	490	295	0	287	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	250	0	0	86	0	0	0
Lane Group Flow (vph)	676	1643	0	0	691	240	295	0	201	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	32.7	111.8			71.1	71.1	17.7		17.7			
Effective Green, g (s)	32.7	111.8			71.1	71.1	17.7		17.7			
Actuated g/C Ratio	0.23	0.77			0.49	0.49	0.12		0.12			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	789	3999			3773	1393	423		343			
v/s Ratio Prot	c0.19	c0.32			0.09		c0.09					
v/s Ratio Perm						0.08			0.07			
v/c Ratio	0.86	0.41			0.18	0.17	0.70		0.59			
Uniform Delay, d1	53.9	5.6			20.7	20.6	61.1		60.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	9.1	0.3			0.1	0.3	5.0		2.5			
Delay (s)	63.0	5.9			20.8	20.8	66.0		62.7			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		22.5			20.8			64.4			0.0	
Approach LOS		C			C			E			A	

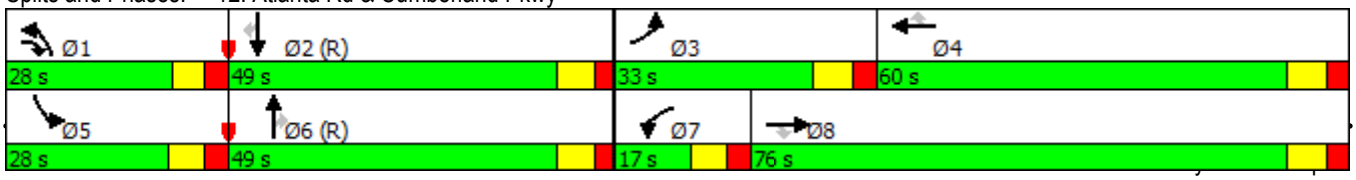
Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

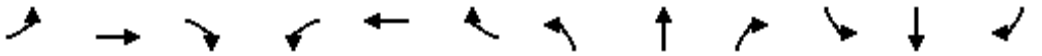
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	533	1176	1160	134	193	119	474	422	59	135	645	163
Future Volume (vph)	533	1176	1160	134	193	119	474	422	59	135	645	163
Lane Group Flow (vph)	635	1367	1196	172	227	157	539	521	82	185	665	187
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	33.0	76.0	28.0	17.0	60.0	60.0	28.0	49.0	49.0	28.0	49.0	49.0
Total Split (%)	19.4%	44.7%	16.5%	10.0%	35.3%	35.3%	16.5%	28.8%	28.8%	16.5%	28.8%	28.8%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	1.26	0.95	0.73	0.88	0.21	0.26	0.86	0.58	0.15	0.89	0.76	0.36
Control Delay	187.6	64.7	28.4	117.7	44.6	4.6	86.9	59.1	0.6	111.2	65.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.6	64.7	28.4	117.7	44.6	4.6	86.9	59.1	0.6	111.2	65.8	9.3
Queue Length 50th (ft)	~454	772	511	100	98	0	212	273	0	205	365	6
Queue Length 95th (ft)	#524	817	608	#134	128	13	#256	298	0	237	442	65
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	504	1444	1632	195	1104	616	628	900	537	217	880	525
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	0.95	0.73	0.88	0.21	0.25	0.86	0.58	0.15	0.85	0.76	0.36

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 91 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	533	1176	1160	134	193	119	474	422	59	135	645	163
Future Volume (vph)	533	1176	1160	134	193	119	474	422	59	135	645	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.84	0.86	0.97	0.78	0.85	0.76	0.88	0.81	0.72	0.73	0.97	0.87
Adj. Flow (vph)	635	1367	1196	172	227	157	539	521	82	185	665	187
RTOR Reduction (vph)	0	0	37	0	0	110	0	0	61	0	0	136
Lane Group Flow (vph)	635	1367	1159	172	227	47	539	521	21	185	665	51
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	25.0	67.4	88.6	9.5	51.4	51.4	21.2	42.9	42.9	19.7	41.9	41.9
Effective Green, g (s)	25.0	67.4	88.6	9.5	51.4	51.4	21.2	42.9	42.9	19.7	41.9	41.9
Actuated g/C Ratio	0.15	0.40	0.52	0.06	0.30	0.30	0.12	0.25	0.25	0.12	0.25	0.25
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	504	1431	1466	195	1091	488	628	901	403	209	880	390
v/s Ratio Prot	c0.18	c0.38	0.10	0.05	0.06		c0.11	0.15		0.10	c0.19	
v/s Ratio Perm			0.31			0.03			0.01			0.03
v/c Ratio	1.26	0.96	0.79	0.88	0.21	0.10	0.86	0.58	0.05	0.89	0.76	0.13
Uniform Delay, d1	72.5	49.8	33.1	79.7	44.1	42.6	72.9	55.6	48.1	74.0	59.3	49.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	132.3	14.4	3.0	34.0	0.1	0.1	11.2	2.7	0.2	32.8	6.0	0.7
Delay (s)	204.8	64.2	36.1	113.7	44.2	42.7	84.1	58.3	48.4	106.8	65.3	50.6
Level of Service	F	E	D	F	D	D	F	E	D	F	E	D
Approach Delay (s)		81.6			65.3			69.8			70.1	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	75.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	NBR	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations										
Traffic Volume (vph)	320	88	1229	24	12	47	469	269	261	90
Future Volume (vph)	320	88	1229	24	12	47	469	269	261	90
Lane Group Flow (vph)	228	234	1413	46	17	66	521	306	148	268
Turn Type	Split	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	4	4	4	8		6	6		2	2
Permitted Phases					8			6		
Detector Phase	4	4	4	8	8	6	6	6	2	2
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	23.3%	23.3%	23.3%	23.3%	23.3%	26.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	Max	Max	Max	C-Max	C-Max
v/c Ratio	0.73	0.73	0.91	0.28	0.09	0.17	0.66	0.52	0.24	0.21
Control Delay	70.6	70.5	15.9	72.3	0.8	48.8	57.9	8.2	34.9	33.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	70.5	15.9	72.3	0.8	48.8	57.9	8.2	34.9	33.2
Queue Length 50th (ft)	223	229	81	23	0	53	246	0	112	100
Queue Length 95th (ft)	327	255	163	28	0	76	312	72	175	127
Internal Link Dist (ft)		1280		195			880			560
Turn Bay Length (ft)	255		245			220		320	440	
Base Capacity (vph)	320	327	1554	625	375	397	794	593	619	1253
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.72	0.91	0.07	0.05	0.17	0.66	0.52	0.24	0.21

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 17 (11%), Referenced to phase 2:NWTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	320	88	1229	2	24	12	47	469	269	261	90	7
Future Volume (vph)	320	88	1229	2	24	12	47	469	269	261	90	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88		0.95	1.00	1.00	0.95	1.00	0.91	0.91	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98	1.00		1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (prot)	1715	1754	2842		3350	1442	1805	3610	1615	1643	3320	
Flt Permitted	0.95	0.98	1.00		1.00	1.00	0.95	1.00	1.00	0.95	0.97	
Satd. Flow (perm)	1715	1754	2842		3350	1442	1805	3610	1615	1643	3320	
Peak-hour factor, PHF	0.94	0.72	0.87	0.50	0.57	0.69	0.71	0.90	0.88	0.88	0.82	0.75
Adj. Flow (vph)	340	122	1413	4	42	17	66	521	306	297	110	9
RTOR Reduction (vph)	0	0	1028	0	0	16	0	0	239	0	1	0
Lane Group Flow (vph)	228	234	385	0	46	1	66	521	67	148	267	0
Heavy Vehicles (%)	0%	1%	0%	0%	8%	12%	0%	0%	0%	0%	2%	0%
Turn Type	Split	NA	Prot	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	4	4	4	8	8		6	6		2	2	
Permitted Phases						8			6			
Actuated Green, G (s)	27.5	27.5	27.5		6.4	6.4	33.0	33.0	33.0	55.1	55.1	
Effective Green, g (s)	27.5	27.5	27.5		6.4	6.4	33.0	33.0	33.0	55.1	55.1	
Actuated g/C Ratio	0.18	0.18	0.18		0.04	0.04	0.22	0.22	0.22	0.37	0.37	
Clearance Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	314	321	521		142	61	397	794	355	603	1219	
v/s Ratio Prot	0.13	0.13	c0.14		c0.01		0.04	c0.14		c0.09	0.08	
v/s Ratio Perm						0.00			0.04			
v/c Ratio	0.73	0.73	0.74		0.32	0.01	0.17	0.66	0.19	0.25	0.22	
Uniform Delay, d1	57.7	57.7	57.9		69.7	68.8	47.4	53.3	47.6	33.0	32.6	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.3	7.2	4.9		1.3	0.1	0.9	4.2	1.2	1.0	0.4	
Delay (s)	65.0	65.0	62.7		71.0	68.8	48.3	57.5	48.8	34.0	33.1	
Level of Service	E	E	E		E	E	D	E	D	C	C	
Approach Delay (s)		63.3			70.4			53.9			33.4	
Approach LOS		E			E			D			C	

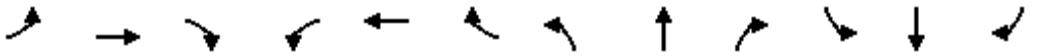
Intersection Summary			
HCM 2000 Control Delay	57.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1527	357	219	606	640	1241
Future Volume (vph)	1527	357	219	606	640	1241
Lane Group Flow (vph)	1755	410	243	666	681	1364
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	70.0	70.0	45.0	115.0	25.0	25.0
Total Split (%)	50.0%	50.0%	32.1%	82.1%	17.9%	17.9%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.38	0.36	0.65	0.17	1.07	1.52
Control Delay	14.7	2.1	67.8	4.6	112.9	260.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	2.1	67.8	4.6	112.9	260.2
Queue Length 50th (ft)	192	0	111	52	~243	~688
Queue Length 95th (ft)	220	37	152	64	#329	#841
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	4655	1129	931	3964	636	899
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.36	0.26	0.17	1.07	1.52

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 48 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1527	357	219	606	0	0	0	0	640	0	1241
Future Volume (vph)	0	1527	357	219	606	0	0	0	0	640	0	1241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1599	3433	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1599	3433	5187					5090		2842
Peak-hour factor, PHF	0.25	0.87	0.87	0.90	0.91	0.25	0.25	0.25	0.25	0.94	0.25	0.91
Adj. Flow (vph)	0	1755	410	243	666	0	0	0	0	681	0	1364
RTOR Reduction (vph)	0	0	162	0	0	0	0	0	0	0	0	544
Lane Group Flow (vph)	0	1755	248	243	666	0	0	0	0	681	0	820
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		84.7	84.7	15.3	107.0					17.5		17.5
Effective Green, g (s)		84.7	84.7	15.3	107.0					17.5		17.5
Actuated g/C Ratio		0.61	0.61	0.11	0.76					0.12		0.12
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		4655	967	375	3964					636		355
v/s Ratio Prot		c0.23		c0.07	0.13							
v/s Ratio Perm			0.16							0.13		c0.29
v/c Ratio		0.38	0.26	0.65	0.17					1.07		2.31
Uniform Delay, d1		14.1	12.9	59.8	4.5					61.2		61.2
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.2	0.6	3.8	0.1					56.1		597.9
Delay (s)		14.4	13.6	63.6	4.6					117.4		659.2
Level of Service		B	B	E	A					F		F
Approach Delay (s)		14.2			20.3			0.0			478.8	
Approach LOS		B			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	200.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	0	5	15	0	55	0	620	7	168	1511	5
Future Volume (Veh/h)	2	0	5	15	0	55	0	620	7	168	1511	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.25	0.31	0.47	0.25	0.76	0.25	0.93	0.44	0.78	0.97	0.62
Hourly flow rate (vph)	4	0	16	32	0	72	0	667	16	215	1558	8
Pedestrians								3			3	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1045	
pX, platoon unblocked	0.51	0.51	0.51	0.51	0.51		0.51					
vC, conflicting volume	2396	2671	782	1903	2671	344	1566			683		
vC1, stage 1 conf vol	1988	1988		675	675							
vC2, stage 2 conf vol	408	683		1228	1996							
vCu, unblocked vol	1822	2358	0	858	2358	344	200			683		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	97	89	100	89	100			77		
cM capacity (veh/h)	93	106	557	295	114	655	709			919		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	20	104	0	445	238	215	779	779	8
Volume Left	4	32	0	0	0	215	0	0	0
Volume Right	16	72	0	0	16	0	0	0	8
cSH	280	477	1700	1700	1700	919	1700	1700	1700
Volume to Capacity	0.07	0.22	0.00	0.26	0.14	0.23	0.46	0.46	0.00
Queue Length 95th (ft)	6	21	0	0	0	23	0	0	0
Control Delay (s)	18.9	14.6	0.0	0.0	0.0	10.1	0.0	0.0	0.0
Lane LOS	C	B				B			
Approach Delay (s)	18.9	14.6	0.0			1.2			
Approach LOS	C	B							

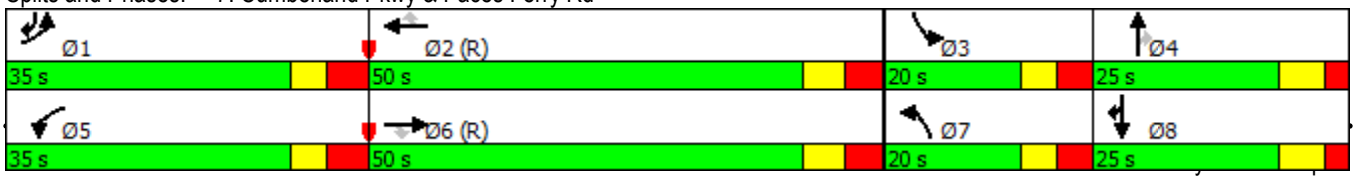
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	60.2%	ICU Level of Service		B
Analysis Period (min)	15			

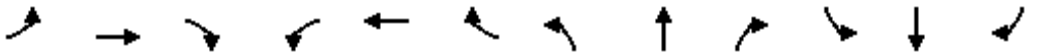
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	465	518	448	902	87	314	383	173	104	797	391
Future Volume (vph)	211	465	518	448	902	87	314	383	173	104	797	391
Lane Group Flow (vph)	248	489	602	487	1100	104	388	435	219	120	960	482
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8 1
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	25.0	12.0	25.0	
Total Split (s)	35.0	50.0	50.0	35.0	50.0	50.0	20.0	25.0	25.0	20.0	25.0	
Total Split (%)	26.9%	38.5%	38.5%	26.9%	38.5%	38.5%	15.4%	19.2%	19.2%	15.4%	19.2%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	
v/c Ratio	0.53	0.38	0.81	0.79	0.48	0.13	1.11	0.83	0.55	0.72	2.13	0.55
Control Delay	60.1	32.7	30.9	60.6	26.9	1.1	133.4	68.0	16.0	81.3	542.5	32.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	32.7	30.9	60.6	26.9	1.1	133.4	68.0	16.0	81.3	542.5	32.7
Queue Length 50th (ft)	72	161	273	204	235	0	~192	191	21	99	~754	158
Queue Length 95th (ft)	93	221	#426	255	258	3	#251	#268	64	#169	#879	155
Internal Link Dist (ft)		610			246			250			395	
Turn Bay Length (ft)	455		250	225		100			130	215		300
Base Capacity (vph)	1066	1291	743	740	2290	799	350	527	399	180	451	1192
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.38	0.81	0.66	0.48	0.13	1.11	0.83	0.55	0.67	2.13	0.40

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	465	518	448	902	87	314	383	173	104	797	391
Future Volume (vph)	211	465	518	448	902	87	314	383	173	104	797	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00	1.00	0.86	0.86
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	5040	3610	1599	3502	5187	1615	3502	3610	1615	1805	3240	2778
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	5040	3610	1599	3502	5187	1615	3502	3610	1615	1805	3240	2778
Peak-hour factor, PHF	0.85	0.95	0.86	0.92	0.82	0.84	0.81	0.88	0.79	0.87	0.88	0.73
Adj. Flow (vph)	248	489	602	487	1100	104	388	435	219	120	906	536
RTOR Reduction (vph)	0	0	171	0	0	58	0	0	163	0	3	72
Lane Group Flow (vph)	248	489	431	487	1100	46	388	435	56	120	957	410
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Actuated Green, G (s)	12.1	46.5	46.5	23.0	57.4	57.4	13.0	19.0	19.0	12.0	18.0	37.1
Effective Green, g (s)	12.1	46.5	46.5	23.0	57.4	57.4	13.0	19.0	19.0	12.0	18.0	37.1
Actuated g/C Ratio	0.09	0.36	0.36	0.18	0.44	0.44	0.10	0.15	0.15	0.09	0.14	0.29
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	469	1291	571	619	2290	713	350	527	236	166	448	792
v/s Ratio Prot	0.05	0.14		c0.14	0.21		c0.11	0.12		0.07	c0.30	0.15
v/s Ratio Perm			c0.27			0.03			0.03			
v/c Ratio	0.53	0.38	0.76	0.79	0.48	0.06	1.11	0.83	0.24	0.72	2.14	0.52
Uniform Delay, d1	56.2	31.0	36.7	51.2	25.7	20.9	58.5	53.9	49.1	57.4	56.0	38.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.8	9.0	6.5	0.7	0.2	80.7	13.7	2.4	14.4	519.1	0.6
Delay (s)	57.3	31.9	45.7	57.7	26.5	21.0	139.2	67.6	51.4	71.8	575.1	39.5
Level of Service	E	C	D	E	C	C	F	E	D	E	F	D
Approach Delay (s)		42.8			35.1			90.9			371.2	
Approach LOS		D			D			F			F	

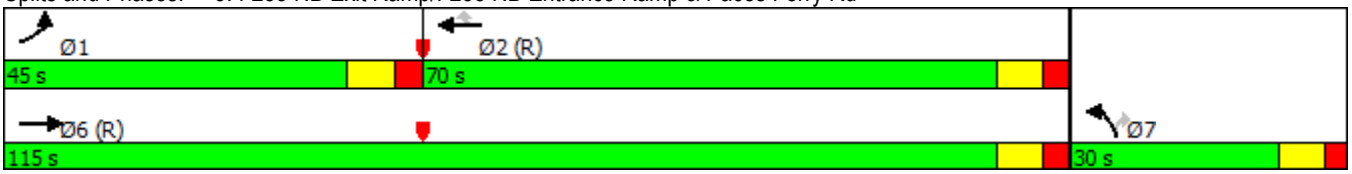
Intersection Summary			
HCM 2000 Control Delay	140.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

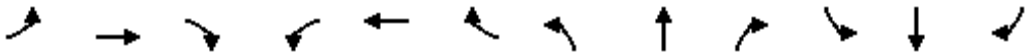
Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	783	884	964	571	245	264
Future Volume (vph)	783	884	964	571	245	264
Lane Group Flow (vph)	921	961	1121	680	310	338
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.92	0.24	0.34	0.42	0.71	0.52
Control Delay	65.0	5.1	28.2	2.6	70.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	5.1	28.2	2.6	70.1	8.3
Queue Length 50th (ft)	436	83	173	0	147	0
Queue Length 95th (ft)	#553	112	187	22	167	19
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	1001	3987	3290	1604	543	722
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.24	0.34	0.42	0.57	0.47

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	783	884	0	0	964	571	245	0	264	0	0	0
Future Volume (vph)	783	884	0	0	964	571	245	0	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3502		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3502		2814			
Peak-hour factor, PHF	0.85	0.92	0.25	0.25	0.86	0.84	0.79	0.25	0.78	0.25	0.25	0.25
Adj. Flow (vph)	921	961	0	0	1121	680	310	0	338	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	389	0	0	296	0	0	0
Lane Group Flow (vph)	921	961	0	0	1121	291	310	0	42	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	41.5	111.5			62.0	62.0	18.0		18.0			
Effective Green, g (s)	41.5	111.5			62.0	62.0	18.0		18.0			
Actuated g/C Ratio	0.29	0.77			0.43	0.43	0.12		0.12			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	1002	3988			3290	1215	434		349			
v/s Ratio Prot	c0.26	0.19			c0.15		c0.09					
v/s Ratio Perm						0.10			0.01			
v/c Ratio	0.92	0.24			0.34	0.24	0.71		0.12			
Uniform Delay, d1	50.1	4.8			27.8	26.5	61.0		56.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	12.9	0.1			0.3	0.5	5.5		0.2			
Delay (s)	63.0	4.9			28.1	26.9	66.5		56.6			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		33.3			27.7			61.4			0.0	
Approach LOS		C			C			E			A	

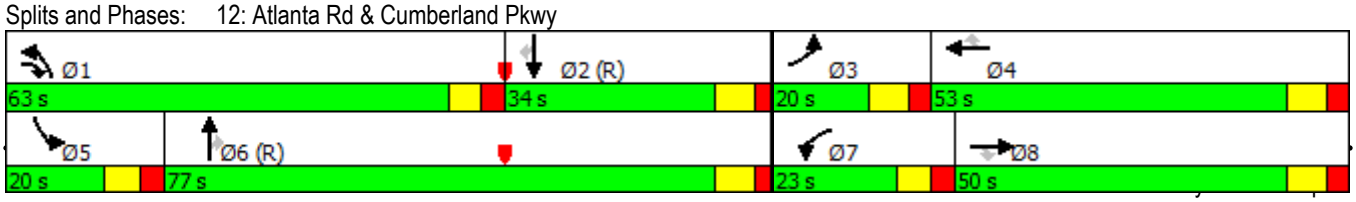
Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

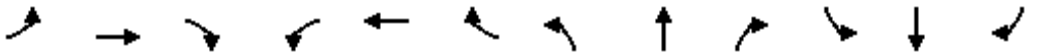
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	352	469	245	993	118	1057	905	86	73	638	300
Future Volume (vph)	206	352	469	245	993	118	1057	905	86	73	638	300
Lane Group Flow (vph)	224	391	533	272	1068	171	1124	953	100	88	709	341
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	20.0	50.0	63.0	23.0	53.0	53.0	63.0	77.0	77.0	20.0	34.0	34.0
Total Split (%)	11.8%	29.4%	37.1%	13.5%	31.2%	31.2%	37.1%	45.3%	45.3%	11.8%	20.0%	20.0%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.93	0.44	0.32	0.86	1.12	0.31	0.80	0.64	0.14	0.72	0.96	0.73
Control Delay	118.2	55.8	16.0	101.3	122.7	7.3	61.7	42.4	2.0	107.4	88.6	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.2	55.8	16.0	101.3	122.7	7.3	61.7	42.4	2.0	107.4	88.6	40.3
Queue Length 50th (ft)	130	195	144	156	~716	0	415	448	0	97	416	179
Queue Length 95th (ft)	#215	251	161	#234	#857	11	443	526	13	150	#639	#333
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	242	895	1787	319	955	554	1660	1480	739	132	741	467
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.44	0.30	0.85	1.12	0.31	0.68	0.64	0.14	0.67	0.96	0.73

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 87 (51%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	352	469	245	993	118	1057	905	86	73	638	300
Future Volume (vph)	206	352	469	245	993	118	1057	905	86	73	638	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.92	0.90	0.88	0.90	0.93	0.69	0.94	0.95	0.86	0.83	0.90	0.88
Adj. Flow (vph)	224	391	533	272	1068	171	1124	953	100	88	709	341
RTOR Reduction (vph)	0	0	38	0	0	126	0	0	59	0	0	139
Lane Group Flow (vph)	224	391	495	272	1068	45	1124	953	41	88	709	202
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	42.2	89.4	15.3	45.0	45.0	47.2	70.4	70.4	11.6	35.3	35.3
Effective Green, g (s)	12.0	42.2	89.4	15.3	45.0	45.0	47.2	70.4	70.4	11.6	35.3	35.3
Actuated g/C Ratio	0.07	0.25	0.53	0.09	0.26	0.26	0.28	0.41	0.41	0.07	0.21	0.21
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	242	896	1479	315	955	427	1399	1480	662	123	742	328
v/s Ratio Prot	0.07	0.11	0.09	c0.08	c0.30		c0.22	0.27		0.05	c0.20	
v/s Ratio Perm			0.08			0.03			0.03			0.13
v/c Ratio	0.93	0.44	0.33	0.86	1.12	0.11	0.80	0.64	0.06	0.72	0.96	0.61
Uniform Delay, d1	78.6	53.9	23.2	76.3	62.5	47.3	57.1	39.8	30.0	77.6	66.6	61.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.9	0.3	0.1	20.9	67.3	0.1	3.4	2.2	0.2	17.9	23.8	8.3
Delay (s)	116.4	54.2	23.3	97.2	129.8	47.4	60.5	42.0	30.1	95.5	90.4	69.5
Level of Service	F	D	C	F	F	D	E	D	C	F	F	E
Approach Delay (s)		52.0			114.6			51.0			84.5	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	73.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	NBR	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations										
Traffic Volume (vph)	306	121	568	304	139	123	182	401	1076	524
Future Volume (vph)	306	121	568	304	139	123	182	401	1076	524
Lane Group Flow (vph)	252	259	645	349	146	160	256	514	584	1208
Turn Type	Split	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	4	4	4	8		6	6		2	2
Permitted Phases					8			6		
Detector Phase	4	4	4	8	8	6	6	6	2	2
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	23.3%	23.3%	23.3%	23.3%	23.3%	26.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	Max	Max	Max	C-Max	C-Max
v/c Ratio	0.83	0.83	0.62	0.72	0.42	0.40	0.34	0.79	1.29	1.30
Control Delay	81.3	80.5	6.4	70.0	11.6	53.7	50.7	24.0	188.0	184.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	80.5	6.4	70.0	11.6	53.7	50.7	24.0	188.0	184.9
Queue Length 50th (ft)	250	257	0	174	0	135	112	130	~815	~852
Queue Length 95th (ft)	#341	320	48	221	62	175	120	168	#1146	#1006
Internal Link Dist (ft)		1280		195			880			560
Turn Bay Length (ft)	255		245			220		320	440	
Base Capacity (vph)	320	330	1055	649	414	397	763	650	453	930
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.78	0.61	0.54	0.35	0.40	0.34	0.79	1.29	1.30

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 29 (19%), Referenced to phase 2:NWTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	306	121	568	29	304	139	123	182	401	1076	524	18
Future Volume (vph)	306	121	568	29	304	139	123	182	401	1076	524	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88		0.95	1.00	1.00	0.95	1.00	0.91	0.91	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.98	1.00		1.00	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)	1715	1768	2842		3477	1583	1805	3471	1615	1643	3364	
Flt Permitted	0.95	0.98	1.00		1.00	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)	1715	1768	2842		3477	1583	1805	3471	1615	1643	3364	
Peak-hour factor, PHF	0.85	0.80	0.88	1.00	0.95	0.95	0.77	0.71	0.78	0.94	0.86	0.48
Adj. Flow (vph)	360	151	645	29	320	146	160	256	514	1145	609	38
RTOR Reduction (vph)	0	0	531	0	0	126	0	0	296	0	1	0
Lane Group Flow (vph)	252	259	114	0	349	20	160	256	218	584	1207	0
Heavy Vehicles (%)	0%	0%	0%	30%	1%	2%	0%	4%	0%	0%	0%	0%
Turn Type	Split	NA	Prot	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	4	4	4	8	8		6	6		2	2	
Permitted Phases						8			6			
Actuated Green, G (s)	26.6	26.6	26.6		21.0	21.0	33.0	33.0	33.0	41.4	41.4	
Effective Green, g (s)	26.6	26.6	26.6		21.0	21.0	33.0	33.0	33.0	41.4	41.4	
Actuated g/C Ratio	0.18	0.18	0.18		0.14	0.14	0.22	0.22	0.22	0.28	0.28	
Clearance Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	304	313	503		486	221	397	763	355	453	928	
v/s Ratio Prot	c0.15	0.15	0.04		c0.10		0.09	0.07		0.36	c0.36	
v/s Ratio Perm						0.01			c0.14			
v/c Ratio	0.83	0.83	0.23		0.72	0.09	0.40	0.34	0.62	1.29	1.30	
Uniform Delay, d1	59.5	59.5	52.9		61.7	56.2	50.1	49.3	52.8	54.3	54.3	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.4	15.9	0.2		5.0	0.2	3.0	1.2	7.8	145.9	143.0	
Delay (s)	75.9	75.4	53.1		66.7	56.4	53.1	50.5	60.5	200.2	197.3	
Level of Service	E	E	D		E	E	D	D	E	F	F	
Approach Delay (s)		63.1			63.7			56.5			198.3	
Approach LOS		E			E			E			F	

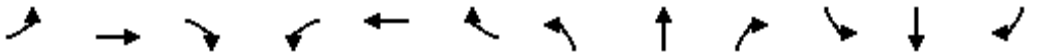
Intersection Summary			
HCM 2000 Control Delay	117.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1289	443	455	968	368	647
Future Volume (vph)	1289	443	455	968	368	647
Lane Group Flow (vph)	1516	554	569	1088	400	681
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	70.0	70.0	45.0	115.0	25.0	25.0
Total Split (%)	50.0%	50.0%	32.1%	82.1%	17.9%	17.9%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.38	0.54	0.81	0.27	0.63	1.11
Control Delay	21.4	8.7	62.9	5.1	63.1	100.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	8.7	62.9	5.1	63.1	100.9
Queue Length 50th (ft)	200	84	257	94	124	~259
Queue Length 95th (ft)	229	133	266	108	162	#398
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	3954	1018	950	3964	636	614
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.54	0.60	0.27	0.63	1.11

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1289	443	455	968	0	0	0	0	368	0	647
Future Volume (vph)	0	1289	443	455	968	0	0	0	0	368	0	647
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1615	3502	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1615	3502	5187					5090		2842
Peak-hour factor, PHF	0.25	0.85	0.80	0.80	0.89	0.25	0.25	0.25	0.25	0.92	0.25	0.95
Adj. Flow (vph)	0	1516	554	569	1088	0	0	0	0	400	0	681
RTOR Reduction (vph)	0	0	189	0	0	0	0	0	0	0	0	259
Lane Group Flow (vph)	0	1516	365	569	1088	0	0	0	0	400	0	422
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		71.9	71.9	28.1	107.0					17.5		17.5
Effective Green, g (s)		71.9	71.9	28.1	107.0					17.5		17.5
Actuated g/C Ratio		0.51	0.51	0.20	0.76					0.12		0.12
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		3951	829	702	3964					636		355
v/s Ratio Prot		0.20		c0.16	0.21							
v/s Ratio Perm			c0.23							0.08		c0.15
v/c Ratio		0.38	0.44	0.81	0.27					0.63		1.19
Uniform Delay, d1		20.6	21.4	53.4	4.9					58.2		61.2
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.3	1.7	7.1	0.2					2.0		109.7
Delay (s)		20.9	23.1	60.5	5.1					60.1		170.9
Level of Service		C	C	E	A					E		F
Approach Delay (s)		21.5			24.1			0.0			129.9	
Approach LOS		C			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	11	0	182	2	1381	1	43	313	2
Future Volume (Veh/h)	1	0	1	11	0	182	2	1381	1	43	313	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.50	0.25	0.82	0.50	0.86	0.25	0.68	0.90	0.50
Hourly flow rate (vph)	4	0	4	22	0	222	4	1606	4	63	348	4
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								3.5				
Percent Blockage								0				
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1045	
pX, platoon unblocked												
vC, conflicting volume	1507	2092	177	1923	2094	805	352			1610		
vC1, stage 1 conf vol	474	474		1616	1616							
vC2, stage 2 conf vol	1033	1618		307	478							
vCu, unblocked vol	1507	2092	177	1923	2094	805	352			1610		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	100	100	79	100	32	100			85		
cM capacity (veh/h)	24	97	839	106	153	328	1218			411		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	8	244	4	1071	539	63	174	174	4
Volume Left	4	22	4	0	0	63	0	0	0
Volume Right	4	222	0	0	4	0	0	0	4
cSH	47	276	1218	1700	1700	411	1700	1700	1700
Volume to Capacity	0.17	0.89	0.00	0.63	0.32	0.15	0.10	0.10	0.00
Queue Length 95th (ft)	14	195	0	0	0	13	0	0	0
Control Delay (s)	97.2	68.8	8.0	0.0	0.0	15.3	0.0	0.0	0.0
Lane LOS	F	F	A			C			
Approach Delay (s)	97.2	68.8	0.0			2.3			
Approach LOS	F	F							

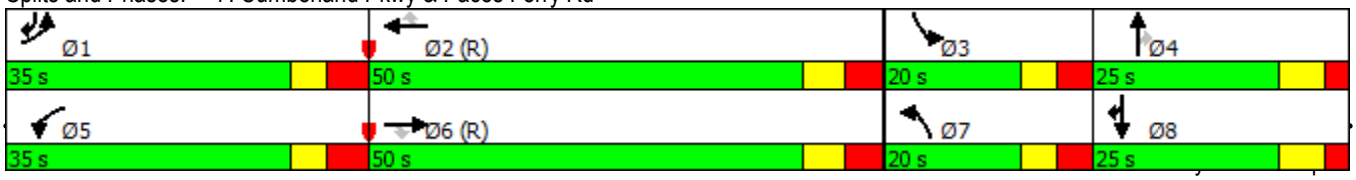
Intersection Summary				
Average Delay	8.1			
Intersection Capacity Utilization	56.8%	ICU Level of Service		B
Analysis Period (min)	15			

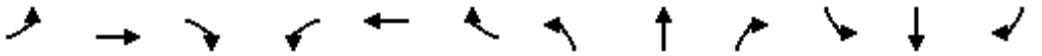
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	819	378	138	409	91	453	989	332	75	196	176
Future Volume (vph)	578	819	378	138	409	91	453	989	332	75	196	176
Lane Group Flow (vph)	642	910	430	148	454	110	581	1177	449	81	235	176
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8 1
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	25.0	12.0	25.0	
Total Split (s)	35.0	50.0	50.0	35.0	50.0	50.0	20.0	25.0	25.0	20.0	25.0	
Total Split (%)	26.9%	38.5%	38.5%	26.9%	38.5%	38.5%	15.4%	19.2%	19.2%	15.4%	19.2%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	
v/c Ratio	0.74	0.56	0.46	0.52	0.24	0.16	1.66	1.84	1.07	0.55	0.53	0.16
Control Delay	56.3	28.3	4.6	63.0	30.0	2.0	345.0	412.9	97.3	70.8	55.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.3	28.3	4.6	63.0	30.0	2.0	345.0	412.9	97.3	70.8	55.8	3.8
Queue Length 50th (ft)	183	291	12	62	97	0	~366	~831	~328	66	106	0
Queue Length 95th (ft)	217	373	70	96	134	7	#397	#910	#377	120	155	25
Internal Link Dist (ft)		610			246			250			395	
Turn Bay Length (ft)	455		250	225		100			130	215		300
Base Capacity (vph)	1076	1624	941	719	1866	673	350	641	418	180	442	1236
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.56	0.46	0.21	0.24	0.16	1.66	1.84	1.07	0.45	0.53	0.14

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 115 (88%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	819	378	138	409	91	453	989	332	75	196	176
Future Volume (vph)	578	819	378	138	409	91	453	989	332	75	196	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00	1.00	0.86	0.86
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	5090	3610	1599	3400	5136	1583	3502	3610	1599	1805	3168	2778
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	5090	3610	1599	3400	5136	1583	3502	3610	1599	1805	3168	2778
Peak-hour factor, PHF	0.90	0.90	0.88	0.93	0.90	0.83	0.78	0.84	0.74	0.93	0.91	0.90
Adj. Flow (vph)	642	910	430	148	454	110	581	1177	449	81	215	196
RTOR Reduction (vph)	0	0	227	0	0	71	0	0	135	0	4	110
Lane Group Flow (vph)	642	910	203	148	454	39	581	1177	314	81	231	66
Heavy Vehicles (%)	0%	0%	1%	3%	1%	2%	0%	0%	1%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Actuated Green, G (s)	22.3	57.1	57.1	11.0	45.8	45.8	13.0	23.1	23.1	9.3	19.4	48.7
Effective Green, g (s)	22.3	57.1	57.1	11.0	45.8	45.8	13.0	23.1	23.1	9.3	19.4	48.7
Actuated g/C Ratio	0.17	0.44	0.44	0.08	0.35	0.35	0.10	0.18	0.18	0.07	0.15	0.37
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	873	1585	702	287	1809	557	350	641	284	129	472	1040
v/s Ratio Prot	c0.13	c0.25		0.04	0.09		c0.17	c0.33		0.04	0.07	0.02
v/s Ratio Perm			0.13			0.02			0.20			
v/c Ratio	0.74	0.57	0.29	0.52	0.25	0.07	1.66	1.84	1.11	0.63	0.49	0.06
Uniform Delay, d1	51.1	27.3	23.4	57.0	29.9	28.0	58.5	53.5	53.5	58.7	50.7	26.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	1.5	1.0	1.6	0.3	0.2	309.4	382.4	84.9	9.2	3.6	0.0
Delay (s)	54.3	28.9	24.5	58.5	30.2	28.2	367.9	435.8	138.4	67.9	54.3	26.1
Level of Service	D	C	C	E	C	C	F	F	F	E	D	C
Approach Delay (s)		36.1			35.8			357.4			46.5	
Approach LOS		D			D			F			D	

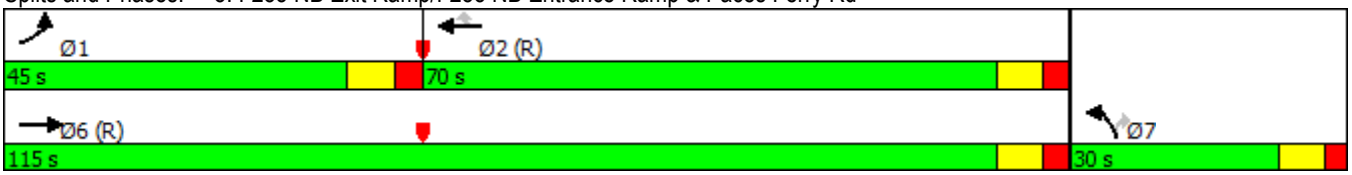
Intersection Summary			
HCM 2000 Control Delay	168.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

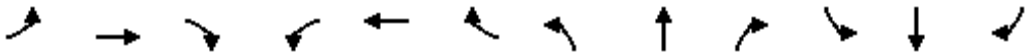
Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	673	1603	630	400	250	265
Future Volume (vph)	673	1603	630	400	250	265
Lane Group Flow (vph)	716	1742	733	519	313	305
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.88	0.44	0.20	0.32	0.72	0.69
Control Delay	65.9	6.5	22.8	2.5	70.4	49.2
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	65.9	6.8	22.8	2.5	70.4	49.2
Queue Length 50th (ft)	336	185	98	0	148	107
Queue Length 95th (ft)	404	239	121	7	170	152
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	898	3980	3682	1630	537	519
Starvation Cap Reductn	0	1291	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.65	0.20	0.32	0.58	0.59

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 110 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	673	1603	0	0	630	400	250	0	265	0	0	0
Future Volume (vph)	673	1603	0	0	630	400	250	0	265	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3467		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3467		2814			
Peak-hour factor, PHF	0.94	0.92	0.25	0.25	0.86	0.77	0.80	0.25	0.87	0.25	0.25	0.25
Adj. Flow (vph)	716	1742	0	0	733	519	312	0	305	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	271	0	0	86	0	0	0
Lane Group Flow (vph)	716	1742	0	0	733	248	313	0	219	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	33.9	111.3			69.4	69.4	18.2		18.2			
Effective Green, g (s)	33.9	111.3			69.4	69.4	18.2		18.2			
Actuated g/C Ratio	0.23	0.77			0.48	0.48	0.13		0.13			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	818	3981			3682	1360	435		353			
v/s Ratio Prot	c0.20	c0.34			0.10		c0.09					
v/s Ratio Perm						0.09			0.08			
v/c Ratio	0.88	0.44			0.20	0.18	0.72		0.62			
Uniform Delay, d1	53.5	5.9			21.8	21.6	60.9		60.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	10.3	0.4			0.1	0.3	5.6		3.4			
Delay (s)	63.8	6.2			21.9	21.9	66.6		63.5			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		23.0			21.9			65.1			0.0	
Approach LOS		C			C			E			A	

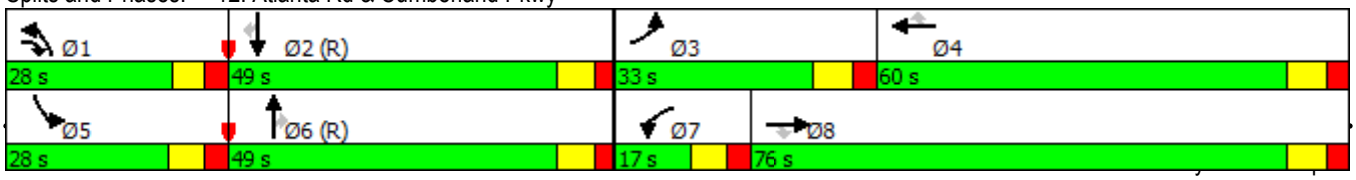
Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

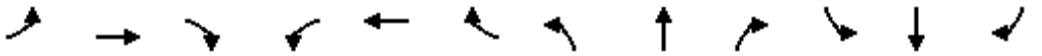
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Future Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Lane Group Flow (vph)	673	1450	1268	182	241	166	570	552	88	196	705	199
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	33.0	76.0	28.0	17.0	60.0	60.0	28.0	49.0	49.0	28.0	49.0	49.0
Total Split (%)	19.4%	44.7%	16.5%	10.0%	35.3%	35.3%	16.5%	28.8%	28.8%	16.5%	28.8%	28.8%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	1.34	1.00	0.77	0.93	0.22	0.27	0.92	0.63	0.17	0.92	0.81	0.38
Control Delay	215.9	74.7	30.2	126.8	44.5	5.5	93.5	60.9	0.7	116.7	68.9	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	215.9	74.7	30.2	126.8	44.5	5.5	93.5	60.9	0.7	116.7	68.9	11.1
Queue Length 50th (ft)	~500	~856	570	106	105	0	226	292	0	219	393	16
Queue Length 95th (ft)	#567	#938	676	#147	136	20	#286	316	0	#253	473	79
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	504	1444	1638	195	1104	616	622	880	529	217	872	522
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.34	1.00	0.77	0.93	0.22	0.27	0.92	0.63	0.17	0.90	0.81	0.38

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 91 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Future Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.84	0.86	0.97	0.78	0.85	0.76	0.88	0.81	0.72	0.73	0.97	0.87
Adj. Flow (vph)	673	1450	1268	182	241	166	570	552	88	196	705	199
RTOR Reduction (vph)	0	0	37	0	0	115	0	0	66	0	0	136
Lane Group Flow (vph)	673	1450	1231	182	241	51	570	552	22	196	705	63
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	25.0	68.0	89.0	9.5	52.0	52.0	21.0	41.9	41.9	20.1	41.5	41.5
Effective Green, g (s)	25.0	68.0	89.0	9.5	52.0	52.0	21.0	41.9	41.9	20.1	41.5	41.5
Actuated g/C Ratio	0.15	0.40	0.52	0.06	0.31	0.31	0.12	0.25	0.25	0.12	0.24	0.24
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	504	1444	1473	195	1104	494	622	880	394	213	872	386
v/s Ratio Prot	c0.20	c0.40	0.10	0.05	0.07		c0.11	0.15		0.11	c0.20	
v/s Ratio Perm			0.33			0.03			0.01			0.04
v/c Ratio	1.34	1.00	0.84	0.93	0.22	0.10	0.92	0.63	0.06	0.92	0.81	0.16
Uniform Delay, d1	72.5	51.0	34.3	79.9	43.9	42.3	73.6	57.1	48.9	74.2	60.5	50.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	164.0	24.7	4.3	45.6	0.1	0.1	18.3	3.4	0.3	40.1	8.0	0.9
Delay (s)	236.5	75.7	38.6	125.5	44.0	42.4	91.9	60.5	49.2	114.3	68.5	51.5
Level of Service	F	E	D	F	D	D	F	E	D	F	E	D
Approach Delay (s)		93.7			68.7			74.5			73.6	
Approach LOS		F			E			E			E	

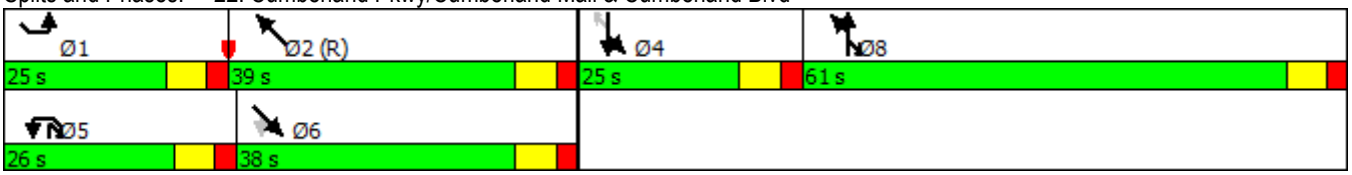
Intersection Summary			
HCM 2000 Control Delay	84.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations											
Traffic Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95
Future Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95
Lane Group Flow (vph)	242	248	1498	4	44	19	70	552	324	315	125
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	8	8	8 5	4	4		1	6		5	2
Permitted Phases						4			6		
Detector Phase	8	8	8 5	4	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	61.0	61.0		25.0	25.0	25.0	25.0	38.0	38.0	26.0	39.0
Total Split (%)	40.7%	40.7%		16.7%	16.7%	16.7%	16.7%	25.3%	25.3%	17.3%	26.0%
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	C-Max
v/c Ratio	0.39	0.40	0.74	0.05	0.27	0.10	0.19	0.74	0.55	0.42	0.17
Control Delay	36.3	36.3	12.4	68.0	72.3	1.0	58.0	62.6	8.6	57.1	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	36.3	12.4	68.0	72.3	1.0	58.0	62.6	8.6	57.1	46.9
Queue Length 50th (ft)	170	174	316	4	22	0	62	268	0	151	51
Queue Length 95th (ft)	242	189	385	9	27	0	90	337	76	203	73
Internal Link Dist (ft)		1280			195			880			560
Turn Bay Length (ft)	255		245				220		320	440	
Base Capacity (vph)	676	692	2026	216	401	288	378	746	590	758	751
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.36	0.74	0.02	0.11	0.07	0.19	0.74	0.55	0.42	0.17

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 17 (11%), Referenced to phase 2:NWT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95	7
Future Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1715	1754	2842	1805	3343	1442	1805	3610	1615	3502	3506	
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1715	1754	2842	1805	3343	1442	1805	3610	1615	3502	3506	
Peak-hour factor, PHF	0.94	0.72	0.87	0.50	0.57	0.69	0.71	0.90	0.88	0.88	0.82	0.75
Adj. Flow (vph)	361	129	1498	4	44	19	70	552	324	315	116	9
RTOR Reduction (vph)	0	0	268	0	0	18	0	0	260	0	4	0
Lane Group Flow (vph)	242	248	1230	4	44	1	70	552	64	315	121	0
Heavy Vehicles (%)	0%	1%	0%	0%	8%	12%	0%	0%	0%	0%	2%	0%
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	8	8	8 5	4	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	53.7	53.7	93.2	6.3	6.3	6.3	31.5	29.5	29.5	32.5	30.5	
Effective Green, g (s)	53.7	53.7	93.2	6.3	6.3	6.3	31.5	29.5	29.5	32.5	30.5	
Actuated g/C Ratio	0.36	0.36	0.62	0.04	0.04	0.04	0.21	0.20	0.20	0.22	0.20	
Clearance Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	613	627	1765	75	140	60	379	709	317	758	712	
v/s Ratio Prot	0.14	0.14	c0.43	0.00	c0.01		0.04	c0.15		0.09	0.03	
v/s Ratio Perm						0.00			0.04			
v/c Ratio	0.39	0.40	0.70	0.05	0.31	0.01	0.18	0.78	0.20	0.42	0.17	
Uniform Delay, d1	36.0	36.0	19.0	69.0	69.8	68.9	48.7	57.2	50.4	50.6	49.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.4	1.2	0.3	1.3	0.1	1.1	8.2	1.4	1.7	0.5	
Delay (s)	36.4	36.4	20.2	69.3	71.0	69.0	49.8	65.4	51.8	52.3	49.8	
Level of Service	D	D	C	E	E	E	D	E	D	D	D	
Approach Delay (s)		24.2			70.3			59.6			51.6	
Approach LOS		C			E			E			D	

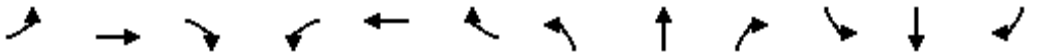
Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1619	378	232	642	678	1315
Future Volume (vph)	1619	378	232	642	678	1315
Lane Group Flow (vph)	1861	434	258	705	721	1445
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	70.0	70.0	45.0	115.0	25.0	25.0
Total Split (%)	50.0%	50.0%	32.1%	82.1%	17.9%	17.9%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.40	0.38	0.66	0.18	1.13	1.68
Control Delay	15.3	2.2	67.7	4.6	132.2	331.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	2.2	67.7	4.6	132.2	331.0
Queue Length 50th (ft)	210	0	118	56	~269	~817
Queue Length 95th (ft)	239	38	160	68	#357	#970
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	4622	1133	931	3964	636	862
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.38	0.28	0.18	1.13	1.68

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 48 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1619	378	232	642	0	0	0	0	678	0	1315
Future Volume (vph)	0	1619	378	232	642	0	0	0	0	678	0	1315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1599	3433	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1599	3433	5187					5090		2842
Peak-hour factor, PHF	0.25	0.87	0.87	0.90	0.91	0.25	0.25	0.25	0.25	0.94	0.25	0.91
Adj. Flow (vph)	0	1861	434	258	705	0	0	0	0	721	0	1445
RTOR Reduction (vph)	0	0	173	0	0	0	0	0	0	0	0	508
Lane Group Flow (vph)	0	1861	261	258	705	0	0	0	0	721	0	938
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		84.1	84.1	15.9	107.0					17.5		17.5
Effective Green, g (s)		84.1	84.1	15.9	107.0					17.5		17.5
Actuated g/C Ratio		0.60	0.60	0.11	0.76					0.12		0.12
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		4622	960	389	3964					636		355
v/s Ratio Prot		c0.24		c0.08	0.14							
v/s Ratio Perm			0.16							0.14		c0.33
v/c Ratio		0.40	0.27	0.66	0.18					1.13		2.64
Uniform Delay, d1		14.7	13.3	59.5	4.5					61.2		61.2
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.3	0.7	4.2	0.1					78.5		746.5
Delay (s)		15.0	14.0	63.7	4.6					139.8		807.7
Level of Service		B	B	E	A					F		F
Approach Delay (s)		14.8			20.4			0.0			585.4	
Approach LOS		B			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	243.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	0	5	16	0	58	0	657	7	178	1602	5
Future Volume (Veh/h)	2	0	5	16	0	58	0	657	7	178	1602	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.25	0.31	0.47	0.25	0.76	0.25	0.93	0.44	0.78	0.97	0.62
Hourly flow rate (vph)	4	0	16	34	0	76	0	706	16	228	1652	8
Pedestrians								3			3	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1045	
pX, platoon unblocked	0.48	0.48	0.48	0.48	0.48		0.48					
vC, conflicting volume	2540	2830	829	2015	2830	364	1660			722		
vC1, stage 1 conf vol	2108	2108		714	714							
vC2, stage 2 conf vol	432	722		1301	2116							
vCu, unblocked vol	2037	2644	0	939	2644	364	196			722		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	97	87	100	88	100			74		
cM capacity (veh/h)	73	86	520	268	92	637	664			889		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	20	110	0	471	251	228	826	826	8
Volume Left	4	34	0	0	0	228	0	0	0
Volume Right	16	76	0	0	16	0	0	0	8
cSH	234	447	1700	1700	1700	889	1700	1700	1700
Volume to Capacity	0.09	0.25	0.00	0.28	0.15	0.26	0.49	0.49	0.00
Queue Length 95th (ft)	7	24	0	0	0	26	0	0	0
Control Delay (s)	21.8	15.7	0.0	0.0	0.0	10.4	0.0	0.0	0.0
Lane LOS	C	C				B			
Approach Delay (s)	21.8	15.7	0.0			1.3			
Approach LOS	C	C							

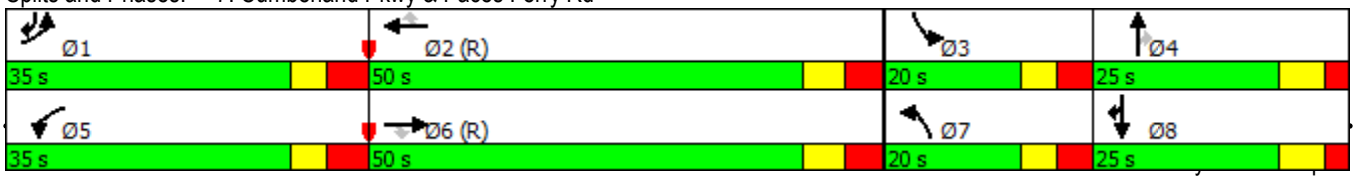
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	63.1%	ICU Level of Service		B
Analysis Period (min)	15			

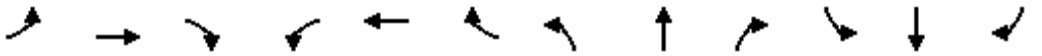
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	493	549	475	956	92	333	406	183	110	845	414
Future Volume (vph)	224	493	549	475	956	92	333	406	183	110	845	414
Lane Group Flow (vph)	264	519	638	516	1166	110	411	461	232	126	1017	510
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8 1
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	25.0	12.0	25.0	
Total Split (s)	35.0	50.0	50.0	35.0	50.0	50.0	20.0	25.0	25.0	20.0	25.0	
Total Split (%)	26.9%	38.5%	38.5%	26.9%	38.5%	38.5%	15.4%	19.2%	19.2%	15.4%	19.2%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	
v/c Ratio	0.53	0.41	0.87	0.81	0.52	0.14	1.17	0.88	0.59	0.75	2.25	0.57
Control Delay	59.2	33.7	37.4	61.0	28.1	1.5	154.3	73.9	18.5	83.2	597.6	33.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	33.7	37.4	61.0	28.1	1.5	154.3	73.9	18.5	83.2	597.6	33.1
Queue Length 50th (ft)	76	174	324	215	258	0	~212	204	32	104	~812	169
Queue Length 95th (ft)	97	235	#524	271	282	7	#270	#294	78	#182	#938	164
Internal Link Dist (ft)		610			246			250			395	
Turn Bay Length (ft)	455		250	225		100			130	215		300
Base Capacity (vph)	1066	1269	731	740	2259	791	350	522	396	180	451	1192
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.41	0.87	0.70	0.52	0.14	1.17	0.88	0.59	0.70	2.25	0.43

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	493	549	475	956	92	333	406	183	110	845	414
Future Volume (vph)	224	493	549	475	956	92	333	406	183	110	845	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00	1.00	0.86	0.86
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	5040	3610	1599	3502	5187	1615	3502	3610	1615	1805	3241	2778
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	5040	3610	1599	3502	5187	1615	3502	3610	1615	1805	3241	2778
Peak-hour factor, PHF	0.85	0.95	0.86	0.92	0.82	0.84	0.81	0.88	0.79	0.87	0.88	0.73
Adj. Flow (vph)	264	519	638	516	1166	110	411	461	232	126	960	567
RTOR Reduction (vph)	0	0	170	0	0	62	0	0	163	0	3	72
Lane Group Flow (vph)	264	519	468	516	1166	48	411	461	69	126	1014	438
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2			4			
Actuated Green, G (s)	12.9	45.7	45.7	23.8	56.6	56.6	13.0	18.8	18.8	12.2	18.0	37.9
Effective Green, g (s)	12.9	45.7	45.7	23.8	56.6	56.6	13.0	18.8	18.8	12.2	18.0	37.9
Actuated g/C Ratio	0.10	0.35	0.35	0.18	0.44	0.44	0.10	0.14	0.14	0.09	0.14	0.29
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	500	1269	562	641	2258	703	350	522	233	169	448	809
v/s Ratio Prot	0.05	0.14		c0.15	0.22		c0.12	0.13		0.07	c0.31	0.16
v/s Ratio Perm			c0.29			0.03			0.04			
v/c Ratio	0.53	0.41	0.83	0.80	0.52	0.07	1.17	0.88	0.30	0.75	2.26	0.54
Uniform Delay, d1	55.7	31.9	38.6	50.9	26.7	21.4	58.5	54.5	49.7	57.4	56.0	38.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.0	13.5	7.3	0.8	0.2	104.4	19.1	3.2	16.3	576.1	0.7
Delay (s)	56.7	32.9	52.2	58.2	27.6	21.5	162.9	73.6	53.0	73.7	632.1	39.5
Level of Service	E	C	D	E	C	C	F	E	D	E	F	D
Approach Delay (s)		46.0			36.0			102.5			406.7	
Approach LOS		D			D			F			F	

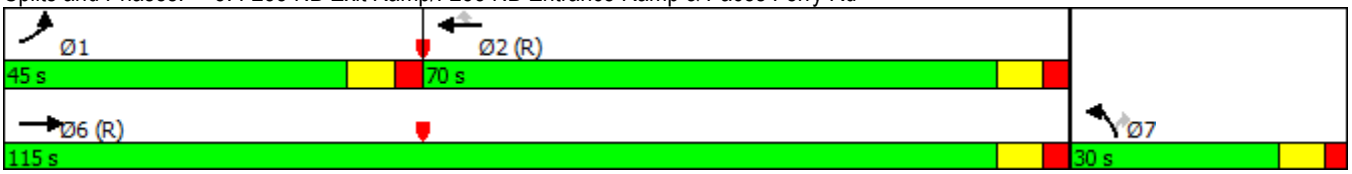
Intersection Summary			
HCM 2000 Control Delay	153.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	830	937	1022	605	260	280
Future Volume (vph)	830	937	1022	605	260	280
Lane Group Flow (vph)	976	1018	1188	720	329	359
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.99	0.26	0.36	0.44	0.73	0.56
Control Delay	78.5	5.4	28.5	2.6	70.0	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.5	5.4	28.5	2.6	70.0	13.0
Queue Length 50th (ft)	475	91	185	0	156	21
Queue Length 95th (ft)	#606	120	200	21	176	41
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	983	3960	3290	1627	543	701
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.26	0.36	0.44	0.61	0.51

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	830	937	0	0	1022	605	260	0	280	0	0	0
Future Volume (vph)	830	937	0	0	1022	605	260	0	280	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3502		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3502		2814			
Peak-hour factor, PHF	0.85	0.92	0.25	0.25	0.86	0.84	0.79	0.25	0.78	0.25	0.25	0.25
Adj. Flow (vph)	976	1018	0	0	1188	720	329	0	359	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	412	0	0	273	0	0	0
Lane Group Flow (vph)	976	1018	0	0	1188	308	329	0	86	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	40.7	110.7			62.0	62.0	18.8		18.8			
Effective Green, g (s)	40.7	110.7			62.0	62.0	18.8		18.8			
Actuated g/C Ratio	0.28	0.76			0.43	0.43	0.13		0.13			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	982	3960			3290	1215	454		364			
v/s Ratio Prot	c0.28	0.20			c0.15		c0.09					
v/s Ratio Perm						0.11			0.03			
v/c Ratio	0.99	0.26			0.36	0.25	0.72		0.24			
Uniform Delay, d1	52.0	5.0			28.1	26.6	60.6		56.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	27.1	0.2			0.3	0.5	5.7		0.3			
Delay (s)	79.1	5.2			28.4	27.1	66.3		57.0			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		41.4			27.9			61.4			0.0	
Approach LOS		D			C			E			A	

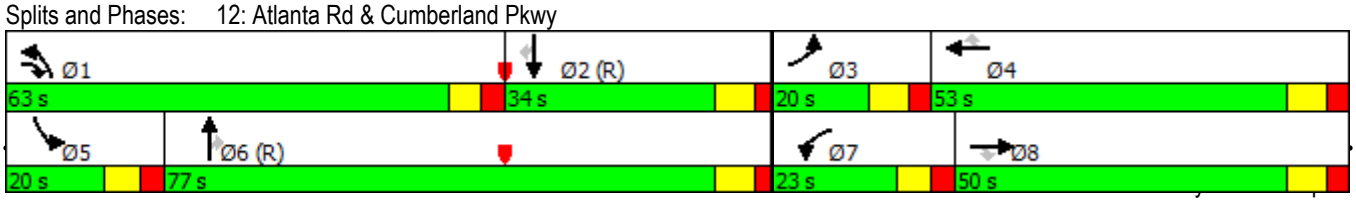
Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

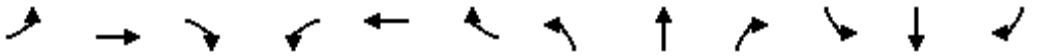
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Future Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Lane Group Flow (vph)	237	414	565	289	1132	181	1191	1009	106	93	751	361
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	20.0	50.0	63.0	23.0	53.0	53.0	63.0	77.0	77.0	20.0	34.0	34.0
Total Split (%)	11.8%	29.4%	37.1%	13.5%	31.2%	31.2%	37.1%	45.3%	45.3%	11.8%	20.0%	20.0%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.98	0.46	0.34	0.91	1.19	0.33	0.82	0.68	0.14	0.74	1.07	0.80
Control Delay	129.4	56.5	15.7	106.7	146.4	8.8	61.2	43.9	2.4	109.7	115.9	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	129.4	56.5	15.7	106.7	146.4	8.8	61.2	43.9	2.4	109.7	115.9	47.0
Queue Length 50th (ft)	138	208	152	167	~794	7	440	485	0	103	~489	209
Queue Length 95th (ft)	#235	265	169	#257	#934	18	469	566	17	#165	#708	#394
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	242	891	1784	319	955	554	1660	1475	737	132	701	452
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.46	0.32	0.91	1.19	0.33	0.72	0.68	0.14	0.70	1.07	0.80

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 87 (51%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Future Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.92	0.90	0.88	0.90	0.93	0.69	0.94	0.95	0.86	0.83	0.90	0.88
Adj. Flow (vph)	237	414	565	289	1132	181	1191	1009	106	93	751	361
RTOR Reduction (vph)	0	0	37	0	0	127	0	0	62	0	0	141
Lane Group Flow (vph)	237	414	528	289	1132	54	1191	1009	44	93	751	220
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	42.0	91.1	15.5	45.0	45.0	49.1	70.2	70.2	11.8	33.4	33.4
Effective Green, g (s)	12.0	42.0	91.1	15.5	45.0	45.0	49.1	70.2	70.2	11.8	33.4	33.4
Actuated g/C Ratio	0.07	0.25	0.54	0.09	0.26	0.26	0.29	0.41	0.41	0.07	0.20	0.20
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	242	891	1507	319	955	427	1455	1475	660	125	702	311
v/s Ratio Prot	0.07	0.11	0.10	c0.08	c0.31		c0.24	0.28		0.05	c0.21	
v/s Ratio Perm			0.09			0.03			0.03			0.14
v/c Ratio	0.98	0.46	0.35	0.91	1.19	0.13	0.82	0.68	0.07	0.74	1.07	0.71
Uniform Delay, d1	78.9	54.4	22.5	76.5	62.5	47.5	56.3	40.8	30.1	77.6	68.3	63.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	51.4	0.4	0.1	27.6	94.1	0.1	3.7	2.6	0.2	21.1	54.2	12.7
Delay (s)	130.3	54.8	22.7	104.2	156.6	47.7	60.0	43.4	30.3	98.7	122.5	76.4
Level of Service	F	D	C	F	F	D	E	D	C	F	F	E
Approach Delay (s)		54.6			134.8			51.4			106.8	
Approach LOS		D			F			D			F	

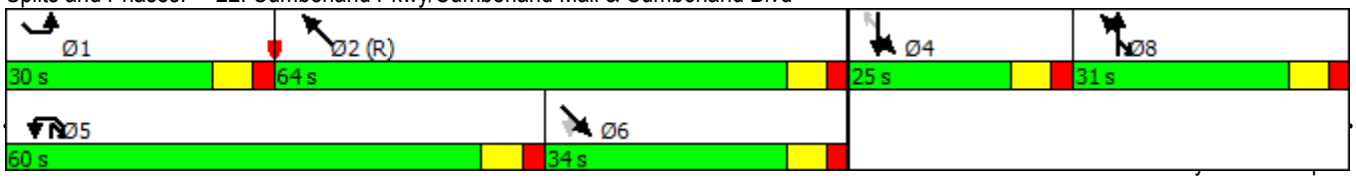
Intersection Summary			
HCM 2000 Control Delay	83.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations											
Traffic Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555
Future Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555
Lane Group Flow (vph)	267	274	684	31	339	155	169	272	545	1214	685
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	8	8	8 5	4	4		1	6		5	2
Permitted Phases						4			6		
Detector Phase	8	8	8 5	4	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	31.0	31.0		25.0	25.0	25.0	30.0	34.0	34.0	60.0	64.0
Total Split (%)	20.7%	20.7%		16.7%	16.7%	16.7%	20.0%	22.7%	22.7%	40.0%	42.7%
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	C-Max
v/c Ratio	0.95	0.94	0.36	0.19	0.82	0.45	0.61	0.44	1.01	0.98	0.50
Control Delay	103.3	101.3	1.6	62.8	81.4	8.6	69.8	57.3	66.2	69.2	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.3	101.3	1.6	62.8	81.4	8.6	69.8	57.3	66.2	69.2	36.9
Queue Length 50th (ft)	277	284	0	28	172	0	157	126	~277	605	267
Queue Length 95th (ft)	#430	#393	25	63	#238	43	201	134	#349	#760	310
Internal Link Dist (ft)		1280			195			880			560
Turn Bay Length (ft)	255		245				220		320	440	
Base Capacity (vph)	281	291	1902	166	428	350	276	624	542	1237	1362
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.94	0.36	0.19	0.79	0.44	0.61	0.44	1.01	0.98	0.50

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 29 (19%), Referenced to phase 2:NWT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555	19
Future Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1715	1768	2842	1388	3574	1583	1805	3471	1615	3502	3578	
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1715	1768	2842	1388	3574	1583	1805	3471	1615	3502	3578	
Peak-hour factor, PHF	0.85	0.80	0.88	1.00	0.95	0.95	0.77	0.71	0.78	0.94	0.86	0.48
Adj. Flow (vph)	381	160	684	31	339	155	169	272	545	1214	645	40
RTOR Reduction (vph)	0	0	298	0	0	137	0	0	252	0	3	0
Lane Group Flow (vph)	267	274	386	31	339	18	169	272	293	1214	682	0
Heavy Vehicles (%)	0%	0%	0%	30%	1%	2%	0%	4%	0%	0%	0%	0%
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	8	8	8 5	4	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	24.7	24.7	84.7	17.3	17.3	17.3	23.0	27.0	27.0	53.0	57.0	
Effective Green, g (s)	24.7	24.7	84.7	17.3	17.3	17.3	23.0	27.0	27.0	53.0	57.0	
Actuated g/C Ratio	0.16	0.16	0.56	0.12	0.12	0.12	0.15	0.18	0.18	0.35	0.38	
Clearance Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	282	291	1604	160	412	182	276	624	290	1237	1359	
v/s Ratio Prot	c0.16	0.15	0.14	0.02	c0.09		0.09	0.08		c0.35	0.19	
v/s Ratio Perm						0.01			c0.18			
v/c Ratio	0.95	0.94	0.24	0.19	0.82	0.10	0.61	0.44	1.01	0.98	0.50	
Uniform Delay, d1	62.0	61.9	16.5	60.0	64.9	59.4	59.3	54.7	61.5	48.0	35.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	39.0	37.3	0.1	0.6	12.5	0.2	9.8	2.2	55.7	21.5	1.3	
Delay (s)	101.0	99.2	16.5	60.6	77.3	59.6	69.1	56.9	117.2	69.5	36.9	
Level of Service	F	F	B	E	E	E	E	E	F	E	D	
Approach Delay (s)		53.4			71.1			92.3			57.8	
Approach LOS		D			E			F			E	

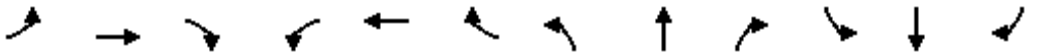
Intersection Summary			
HCM 2000 Control Delay	65.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1366	470	482	1026	390	686
Future Volume (vph)	1366	470	482	1026	390	686
Lane Group Flow (vph)	1607	588	603	1153	424	722
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	70.0	70.0	45.0	115.0	25.0	25.0
Total Split (%)	50.0%	50.0%	32.1%	82.1%	17.9%	17.9%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.41	0.59	0.82	0.29	0.67	1.23
Control Delay	22.7	10.9	62.1	5.2	64.2	150.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	10.9	62.1	5.2	64.2	150.0
Queue Length 50th (ft)	220	118	273	101	132	~335
Queue Length 95th (ft)	252	174	277	116	171	#475
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	3874	1002	950	3964	636	586
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.59	0.63	0.29	0.67	1.23

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1366	470	482	1026	0	0	0	0	390	0	686
Future Volume (vph)	0	1366	470	482	1026	0	0	0	0	390	0	686
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1615	3502	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1615	3502	5187					5090		2842
Peak-hour factor, PHF	0.25	0.85	0.80	0.80	0.89	0.25	0.25	0.25	0.25	0.92	0.25	0.95
Adj. Flow (vph)	0	1607	588	602	1153	0	0	0	0	424	0	722
RTOR Reduction (vph)	0	0	190	0	0	0	0	0	0	0	0	231
Lane Group Flow (vph)	0	1607	398	603	1153	0	0	0	0	424	0	491
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		70.5	70.5	29.5	107.0					17.5		17.5
Effective Green, g (s)		70.5	70.5	29.5	107.0					17.5		17.5
Actuated g/C Ratio		0.50	0.50	0.21	0.76					0.12		0.12
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		3874	813	737	3964					636		355
v/s Ratio Prot		0.21		c0.17	0.22							
v/s Ratio Perm			c0.25							0.08		c0.17
v/c Ratio		0.41	0.49	0.82	0.29					0.67		1.38
Uniform Delay, d1		21.8	22.9	52.7	5.0					58.5		61.2
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.3	2.1	7.0	0.2					2.6		189.1
Delay (s)		22.1	25.0	59.7	5.2					61.1		250.3
Level of Service		C	C	E	A					E		F
Approach Delay (s)		22.9			23.9			0.0			180.3	
Approach LOS		C			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	58.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	11	0	182	2	1381	1	43	313	2
Future Volume (Veh/h)	1	0	1	11	0	182	2	1381	1	43	313	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.50	0.25	0.82	0.50	0.86	0.25	0.68	0.90	0.50
Hourly flow rate (vph)	4	0	4	22	0	222	4	1606	4	63	348	4
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								3.5				
Percent Blockage								0				
Right turn flare (veh)						6						
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1045	
pX, platoon unblocked												
vC, conflicting volume	1396	2092	177	1923	2094	805	352			1610		
vC1, stage 1 conf vol	474	474		1616	1616							
vC2, stage 2 conf vol	922	1618		307	478							
vCu, unblocked vol	1396	2092	177	1923	2094	805	352			1610		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	100	79	100	32	100			85		
cM capacity (veh/h)	31	97	839	106	153	328	1218			411		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	8	244	4	1071	539	63	174	174	4
Volume Left	4	22	4	0	0	63	0	0	0
Volume Right	4	222	0	0	4	0	0	0	4
cSH	60	360	1218	1700	1700	411	1700	1700	1700
Volume to Capacity	0.13	0.68	0.00	0.63	0.32	0.15	0.10	0.10	0.00
Queue Length 95th (ft)	11	119	0	0	0	13	0	0	0
Control Delay (s)	74.5	37.3	8.0	0.0	0.0	15.3	0.0	0.0	0.0
Lane LOS	F	E	A			C			
Approach Delay (s)	74.5	37.3	0.0			2.3			
Approach LOS	F	E							

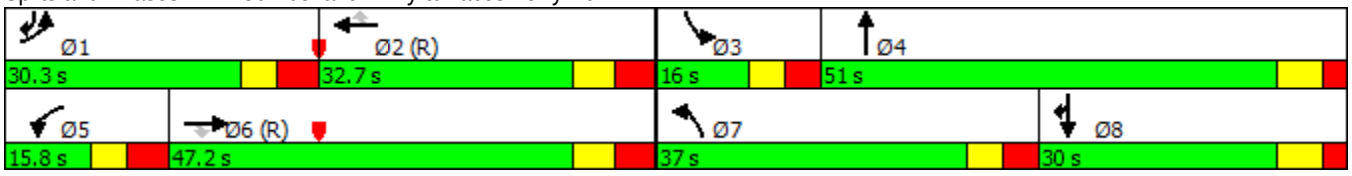
Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	62.8%	ICU Level of Service	B	
Analysis Period (min)	15			

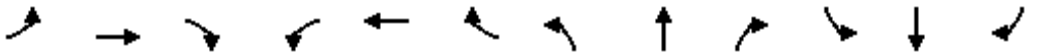
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	578	819	378	138	409	91	453	989	75	196	176
Future Volume (vph)	578	819	378	138	409	91	453	989	75	196	176
Lane Group Flow (vph)	642	910	430	148	454	110	581	1626	81	260	151
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4	3	8	8 1
Permitted Phases			6			2					
Detector Phase	1	6	6	5	2	2	7	4	3	8	8 1
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	12.0	25.0	
Total Split (s)	30.3	47.2	47.2	15.8	32.7	32.7	37.0	51.0	16.0	30.0	
Total Split (%)	23.3%	36.3%	36.3%	12.2%	25.2%	25.2%	28.5%	39.2%	12.3%	23.1%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	Max	
v/c Ratio	0.78	0.83	0.37	0.69	0.43	0.20	0.83	0.93	0.68	0.28	0.13
Control Delay	59.4	50.4	4.0	76.3	47.2	0.8	60.1	50.0	86.7	41.1	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	50.4	4.0	76.3	47.2	0.8	60.1	50.0	86.7	41.1	3.3
Queue Length 50th (ft)	183	377	0	63	125	0	242	466	68	69	0
Queue Length 95th (ft)	227	461	37	#107	163	0	251	480	#141	105	22
Internal Link Dist (ft)		610			246			250		395	
Turn Bay Length (ft)	455		400	400		100			215		300
Base Capacity (vph)	892	1090	1149	217	1046	543	808	1745	124	932	1239
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.83	0.37	0.68	0.43	0.20	0.72	0.93	0.65	0.28	0.12

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 115 (88%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	819	378	138	409	91	453	989	332	75	196	176
Future Volume (vph)	578	819	378	138	409	91	453	989	332	75	196	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	0.88	0.97	0.91	1.00	0.97	0.91		1.00	0.81	0.81
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.97	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	5090	3610	2814	3400	5136	1583	3502	4958		1805	4424	2616
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	5090	3610	2814	3400	5136	1583	3502	4958		1805	4424	2616
Peak-hour factor, PHF	0.90	0.90	0.88	0.93	0.90	0.83	0.78	0.84	0.74	0.93	0.91	0.90
Adj. Flow (vph)	642	910	430	148	454	110	581	1177	449	81	215	196
RTOR Reduction (vph)	0	0	300	0	0	88	0	53	0	0	19	87
Lane Group Flow (vph)	642	910	130	148	454	22	581	1573	0	81	241	64
Heavy Vehicles (%)	0%	0%	1%	3%	1%	2%	0%	0%	1%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2						
Actuated Green, G (s)	21.0	39.3	39.3	8.2	26.5	26.5	26.2	44.4		8.6	26.8	54.8
Effective Green, g (s)	21.0	39.3	39.3	8.2	26.5	26.5	26.2	44.4		8.6	26.8	54.8
Actuated g/C Ratio	0.16	0.30	0.30	0.06	0.20	0.20	0.20	0.34		0.07	0.21	0.42
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	822	1091	850	214	1046	322	705	1693		119	912	1102
v/s Ratio Prot	c0.13	c0.25		0.04	0.09		c0.17	c0.32		0.04	0.05	0.02
v/s Ratio Perm			0.05			0.01						
v/c Ratio	0.78	0.83	0.15	0.69	0.43	0.07	0.82	0.93		0.68	0.26	0.06
Uniform Delay, d1	52.3	42.3	33.2	59.7	45.2	41.8	49.7	41.3		59.4	43.3	22.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	7.5	0.4	9.3	1.3	0.4	7.8	10.5		14.8	0.7	0.0
Delay (s)	57.1	49.8	33.6	68.9	46.5	42.2	57.5	51.8		74.2	44.0	22.3
Level of Service	E	D	C	E	D	D	E	D		E	D	C
Approach Delay (s)		48.7			50.5			53.3			42.3	
Approach LOS		D			D			D			D	

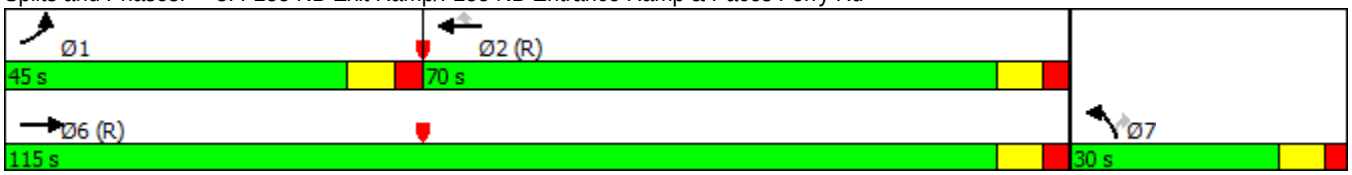
Intersection Summary			
HCM 2000 Control Delay	50.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

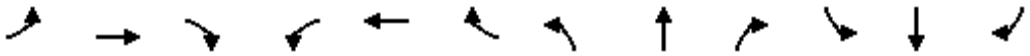
Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	673	1603	630	400	250	265
Future Volume (vph)	673	1603	630	400	250	265
Lane Group Flow (vph)	716	1742	733	519	313	305
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.88	0.44	0.20	0.32	0.72	0.69
Control Delay	65.9	6.5	22.8	2.5	70.4	49.2
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	65.9	6.8	22.8	2.5	70.4	49.2
Queue Length 50th (ft)	336	185	98	0	148	107
Queue Length 95th (ft)	404	239	121	7	170	152
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	898	3980	3682	1630	537	519
Starvation Cap Reductn	0	1291	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.65	0.20	0.32	0.58	0.59

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 110 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	673	1603	0	0	630	400	250	0	265	0	0	0
Future Volume (vph)	673	1603	0	0	630	400	250	0	265	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3467		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3467		2814			
Peak-hour factor, PHF	0.94	0.92	0.25	0.25	0.86	0.77	0.80	0.25	0.87	0.25	0.25	0.25
Adj. Flow (vph)	716	1742	0	0	733	519	312	0	305	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	271	0	0	86	0	0	0
Lane Group Flow (vph)	716	1742	0	0	733	248	313	0	219	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	33.9	111.3			69.4	69.4	18.2		18.2			
Effective Green, g (s)	33.9	111.3			69.4	69.4	18.2		18.2			
Actuated g/C Ratio	0.23	0.77			0.48	0.48	0.13		0.13			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	818	3981			3682	1360	435		353			
v/s Ratio Prot	c0.20	c0.34			0.10		c0.09					
v/s Ratio Perm						0.09			0.08			
v/c Ratio	0.88	0.44			0.20	0.18	0.72		0.62			
Uniform Delay, d1	53.5	5.9			21.8	21.6	60.9		60.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	10.3	0.4			0.1	0.3	5.6		3.4			
Delay (s)	63.8	6.2			21.9	21.9	66.6		63.5			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		23.0			21.9			65.1			0.0	
Approach LOS		C			C			E			A	

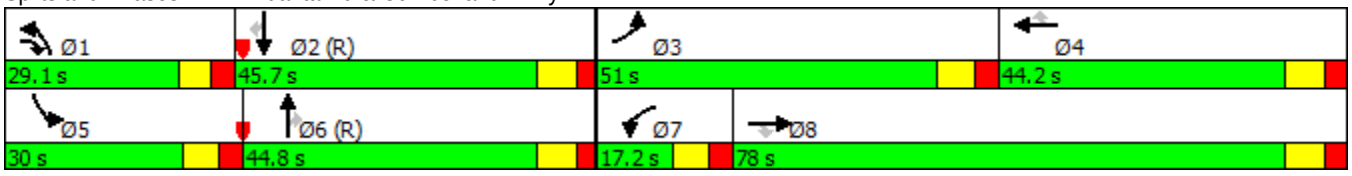
Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

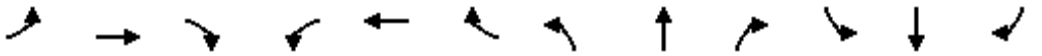
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Future Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Lane Group Flow (vph)	673	1450	1268	182	241	166	570	552	88	196	705	199
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	51.0	78.0	29.1	17.2	44.2	44.2	29.1	44.8	44.8	30.0	45.7	45.7
Total Split (%)	30.0%	45.9%	17.1%	10.1%	26.0%	26.0%	17.1%	26.4%	26.4%	17.6%	26.9%	26.9%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.88	0.98	0.75	0.91	0.28	0.32	0.87	0.68	0.18	0.88	0.88	0.40
Control Delay	76.8	66.9	27.5	122.6	54.4	7.7	87.0	65.3	0.8	106.7	76.7	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.8	66.9	27.5	122.6	54.4	7.7	87.0	65.3	0.8	106.7	76.7	12.6
Queue Length 50th (ft)	375	832	543	106	116	0	224	302	0	216	403	20
Queue Length 95th (ft)	401	#885	644	#145	155	25	#268	327	0	246	#502	86
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	868	1486	1688	199	873	522	655	811	499	238	803	492
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.98	0.75	0.91	0.28	0.32	0.87	0.68	0.18	0.82	0.88	0.40

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 91 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Future Volume (vph)	565	1247	1230	142	205	126	502	447	63	143	684	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.84	0.86	0.97	0.78	0.85	0.76	0.88	0.81	0.72	0.73	0.97	0.87
Adj. Flow (vph)	673	1450	1268	182	241	166	570	552	88	196	705	199
RTOR Reduction (vph)	0	0	35	0	0	126	0	0	68	0	0	136
Lane Group Flow (vph)	673	1450	1233	182	241	40	570	552	20	196	705	63
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	38.0	70.0	92.1	9.7	41.2	41.2	22.1	38.6	38.6	21.2	38.2	38.2
Effective Green, g (s)	38.0	70.0	92.1	9.7	41.2	41.2	22.1	38.6	38.6	21.2	38.2	38.2
Actuated g/C Ratio	0.22	0.41	0.54	0.06	0.24	0.24	0.13	0.23	0.23	0.12	0.22	0.22
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	767	1486	1524	199	874	391	655	811	363	225	803	355
v/s Ratio Prot	c0.20	c0.40	0.11	0.05	0.07		c0.11	0.15		0.11	c0.20	
v/s Ratio Perm			0.33			0.02			0.01			0.04
v/c Ratio	0.88	0.98	0.81	0.91	0.28	0.10	0.87	0.68	0.06	0.87	0.88	0.18
Uniform Delay, d1	63.8	49.2	31.8	79.7	52.3	50.0	72.5	60.1	51.4	73.1	63.6	53.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.1	17.7	3.3	40.4	0.2	0.1	12.1	4.6	0.3	28.7	13.0	1.1
Delay (s)	74.8	66.9	35.0	120.1	52.5	50.2	84.6	64.6	51.7	101.7	76.7	54.3
Level of Service	E	E	D	F	D	D	F	E	D	F	E	D
Approach Delay (s)		56.5			72.7			73.1			77.1	
Approach LOS		E			E			E			E	

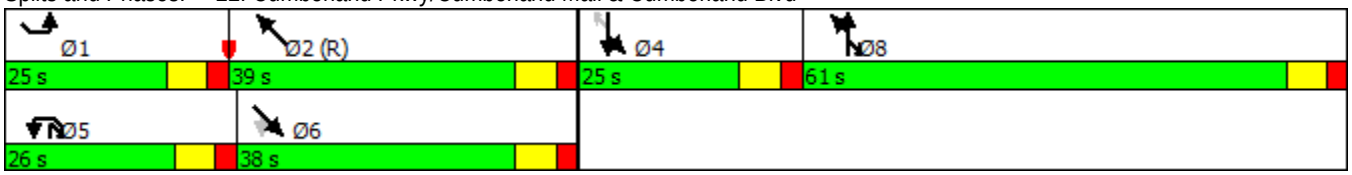
Intersection Summary			
HCM 2000 Control Delay	64.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations											
Traffic Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95
Future Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95
Lane Group Flow (vph)	242	248	1498	4	44	19	70	552	324	315	125
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	8	8	8 5	4	4		1	6		5	2
Permitted Phases						4			6		
Detector Phase	8	8	8 5	4	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	61.0	61.0		25.0	25.0	25.0	25.0	38.0	38.0	26.0	39.0
Total Split (%)	40.7%	40.7%		16.7%	16.7%	16.7%	16.7%	25.3%	25.3%	17.3%	26.0%
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	C-Max
v/c Ratio	0.39	0.40	0.74	0.05	0.27	0.10	0.19	0.74	0.55	0.42	0.17
Control Delay	36.3	36.3	12.4	68.0	72.3	1.0	58.0	62.6	8.6	57.1	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	36.3	12.4	68.0	72.3	1.0	58.0	62.6	8.6	57.1	46.9
Queue Length 50th (ft)	170	174	316	4	22	0	62	268	0	151	51
Queue Length 95th (ft)	242	189	385	9	27	0	90	337	76	203	73
Internal Link Dist (ft)		1280			195			880			560
Turn Bay Length (ft)	255		245				220		320	440	
Base Capacity (vph)	676	692	2026	216	401	288	378	746	590	758	751
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.36	0.74	0.02	0.11	0.07	0.19	0.74	0.55	0.42	0.17

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 17 (11%), Referenced to phase 2:NWT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95	7
Future Volume (vph)	339	93	1303	2	25	13	50	497	285	277	95	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1715	1754	2842	1805	3343	1442	1805	3610	1615	3502	3506	
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1715	1754	2842	1805	3343	1442	1805	3610	1615	3502	3506	
Peak-hour factor, PHF	0.94	0.72	0.87	0.50	0.57	0.69	0.71	0.90	0.88	0.88	0.82	0.75
Adj. Flow (vph)	361	129	1498	4	44	19	70	552	324	315	116	9
RTOR Reduction (vph)	0	0	268	0	0	18	0	0	260	0	4	0
Lane Group Flow (vph)	242	248	1230	4	44	1	70	552	64	315	121	0
Heavy Vehicles (%)	0%	1%	0%	0%	8%	12%	0%	0%	0%	0%	2%	0%
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	8	8	8 5	4	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	53.7	53.7	93.2	6.3	6.3	6.3	31.5	29.5	29.5	32.5	30.5	
Effective Green, g (s)	53.7	53.7	93.2	6.3	6.3	6.3	31.5	29.5	29.5	32.5	30.5	
Actuated g/C Ratio	0.36	0.36	0.62	0.04	0.04	0.04	0.21	0.20	0.20	0.22	0.20	
Clearance Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	613	627	1765	75	140	60	379	709	317	758	712	
v/s Ratio Prot	0.14	0.14	c0.43	0.00	c0.01		0.04	c0.15		0.09	0.03	
v/s Ratio Perm						0.00			0.04			
v/c Ratio	0.39	0.40	0.70	0.05	0.31	0.01	0.18	0.78	0.20	0.42	0.17	
Uniform Delay, d1	36.0	36.0	19.0	69.0	69.8	68.9	48.7	57.2	50.4	50.6	49.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.4	1.2	0.3	1.3	0.1	1.1	8.2	1.4	1.7	0.5	
Delay (s)	36.4	36.4	20.2	69.3	71.0	69.0	49.8	65.4	51.8	52.3	49.8	
Level of Service	D	D	C	E	E	E	D	E	D	D	D	
Approach Delay (s)		24.2			70.3			59.6			51.6	
Approach LOS		C			E			E			D	

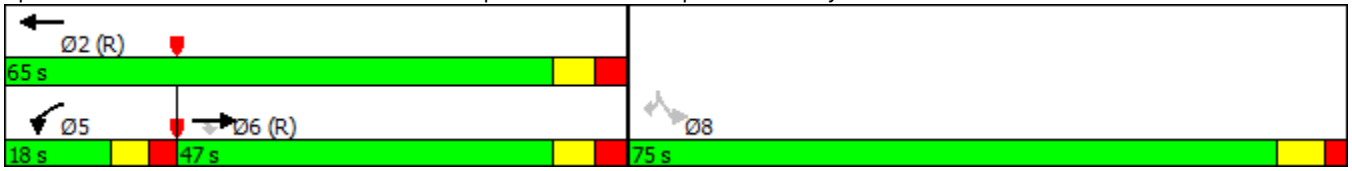
Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

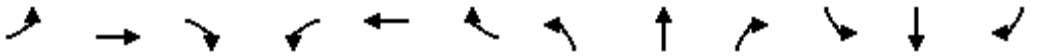
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1619	378	232	642	678	1315
Future Volume (vph)	1619	378	232	642	678	1315
Lane Group Flow (vph)	1861	434	258	705	721	1445
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	47.0	47.0	18.0	65.0	75.0	75.0
Total Split (%)	33.6%	33.6%	12.9%	46.4%	53.6%	53.6%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.87	0.59	0.96	0.33	0.29	0.98
Control Delay	53.4	8.7	108.9	29.0	22.3	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	8.7	108.9	29.0	22.3	50.7
Queue Length 50th (ft)	400	20	122	160	137	659
Queue Length 95th (ft)	420	98	#212	194	167	#859
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	2143	736	269	2111	2454	1470
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.59	0.96	0.33	0.29	0.98

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 48 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1619	378	232	642	0	0	0	0	678	0	1315
Future Volume (vph)	0	1619	378	232	642	0	0	0	0	678	0	1315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1599	3433	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1599	3433	5187					5090		2842
Peak-hour factor, PHF	0.25	0.87	0.87	0.90	0.91	0.25	0.25	0.25	0.25	0.94	0.25	0.91
Adj. Flow (vph)	0	1861	434	258	705	0	0	0	0	721	0	1445
RTOR Reduction (vph)	0	0	291	0	0	0	0	0	0	0	0	100
Lane Group Flow (vph)	0	1861	143	258	705	0	0	0	0	721	0	1345
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		39.0	39.0	11.0	57.0					67.5		67.5
Effective Green, g (s)		39.0	39.0	11.0	57.0					67.5		67.5
Actuated g/C Ratio		0.28	0.28	0.08	0.41					0.48		0.48
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		2143	445	269	2111					2454		1370
v/s Ratio Prot		c0.24		c0.08	0.14							
v/s Ratio Perm			0.09							0.14		c0.47
v/c Ratio		0.87	0.32	0.96	0.33					0.29		0.98
Uniform Delay, d1		48.1	40.0	64.3	28.5					21.9		35.6
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		5.1	1.9	43.2	0.4					0.1		19.9
Delay (s)		53.2	41.9	107.4	28.9					21.9		55.5
Level of Service		D	D	F	C					C		E
Approach Delay (s)		51.0			49.9			0.0			44.3	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	48.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	0	5	16	0	58	0	657	7	178	1602	5
Future Volume (Veh/h)	2	0	5	16	0	58	0	657	7	178	1602	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.25	0.31	0.47	0.25	0.76	0.25	0.93	0.44	0.78	0.97	0.62
Hourly flow rate (vph)	4	0	16	34	0	76	0	706	16	228	1652	8
Pedestrians								3			3	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)						6						
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1045	
pX, platoon unblocked	0.48	0.48	0.48	0.48	0.48		0.48					
vC, conflicting volume	2502	2830	829	2015	2830	364	1660			722		
vC1, stage 1 conf vol	2108	2108		714	714							
vC2, stage 2 conf vol	394	722		1301	2116							
vCu, unblocked vol	1958	2644	0	939	2644	364	196			722		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	97	87	100	88	100			74		
cM capacity (veh/h)	74	86	520	268	92	637	664			889		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	20	110	0	471	251	228	826	826	8
Volume Left	4	34	0	0	0	228	0	0	0
Volume Right	16	76	0	0	16	0	0	0	8
cSH	235	868	1700	1700	1700	889	1700	1700	1700
Volume to Capacity	0.09	0.13	0.00	0.28	0.15	0.26	0.49	0.49	0.00
Queue Length 95th (ft)	7	11	0	0	0	26	0	0	0
Control Delay (s)	21.7	14.2	0.0	0.0	0.0	10.4	0.0	0.0	0.0
Lane LOS	C	B				B			
Approach Delay (s)	21.7	14.2	0.0			1.3			
Approach LOS	C	B							

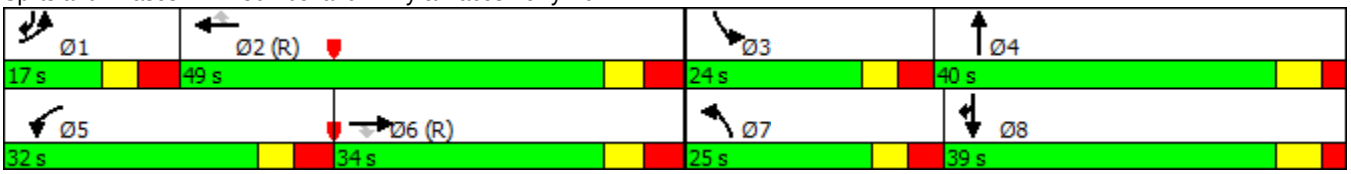
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	61.0%	ICU Level of Service		B
Analysis Period (min)	15			

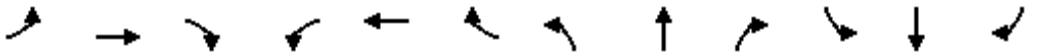
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	224	493	549	475	956	92	333	406	110	845	414
Future Volume (vph)	224	493	549	475	956	92	333	406	110	845	414
Lane Group Flow (vph)	264	519	638	516	1166	110	411	693	126	1017	510
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4	3	8	8 1
Permitted Phases			6			2					
Detector Phase	1	6	6	5	2	2	7	4	3	8	8 1
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	12.0	25.0	
Total Split (s)	17.0	34.0	34.0	32.0	49.0	49.0	25.0	40.0	24.0	39.0	
Total Split (%)	13.1%	26.2%	26.2%	24.6%	37.7%	37.7%	19.2%	30.8%	18.5%	30.0%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	Max	
v/c Ratio	0.72	0.68	0.64	0.84	0.71	0.18	0.87	0.48	0.66	0.89	0.47
Control Delay	70.7	52.5	12.8	64.8	42.2	2.1	74.1	35.2	71.8	57.4	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	52.5	12.8	64.8	42.2	2.1	74.1	35.2	71.8	57.4	21.6
Queue Length 50th (ft)	78	216	51	215	317	0	176	154	103	341	133
Queue Length 95th (ft)	104	280	102	279	329	8	208	196	162	#399	135
Internal Link Dist (ft)		610			246			250		395	
Turn Bay Length (ft)	455		425	400		100			215		300
Base Capacity (vph)	368	768	1001	659	1636	615	484	1440	236	1145	1095
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.68	0.64	0.78	0.71	0.18	0.85	0.48	0.53	0.89	0.47

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	493	549	475	956	92	333	406	183	110	845	414
Future Volume (vph)	224	493	549	475	956	92	333	406	183	110	845	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	0.88	0.97	0.91	1.00	0.97	0.91		1.00	0.81	0.81
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	5040	3610	2814	3502	5187	1615	3502	4927		1805	4578	2616
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	5040	3610	2814	3502	5187	1615	3502	4927		1805	4578	2616
Peak-hour factor, PHF	0.85	0.95	0.86	0.92	0.82	0.84	0.81	0.88	0.79	0.87	0.88	0.73
Adj. Flow (vph)	264	519	638	516	1166	110	411	461	232	126	960	567
RTOR Reduction (vph)	0	0	402	0	0	75	0	68	0	0	5	102
Lane Group Flow (vph)	264	519	236	516	1166	35	411	625	0	126	1012	408
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2						
Actuated Green, G (s)	9.5	27.7	27.7	22.8	41.0	41.0	17.6	36.2		13.8	32.4	48.9
Effective Green, g (s)	9.5	27.7	27.7	22.8	41.0	41.0	17.6	36.2		13.8	32.4	48.9
Actuated g/C Ratio	0.07	0.21	0.21	0.18	0.32	0.32	0.14	0.28		0.11	0.25	0.38
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	769	599	614	1635	509	474	1371		191	1140	984
v/s Ratio Prot	0.05	0.14		c0.15	c0.22		c0.12	c0.13		0.07	c0.22	0.16
v/s Ratio Perm			0.08			0.02						
v/c Ratio	0.72	0.67	0.39	0.84	0.71	0.07	0.87	0.46		0.66	0.89	0.41
Uniform Delay, d1	58.9	47.0	43.9	51.8	39.3	31.1	55.1	38.8		55.8	47.1	30.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.5	4.7	1.9	10.1	2.7	0.3	15.3	1.1		8.0	10.4	0.3
Delay (s)	65.5	51.7	45.9	61.9	42.0	31.4	70.4	39.9		63.8	57.4	30.3
Level of Service	E	D	D	E	D	C	E	D		E	E	C
Approach Delay (s)		51.7			47.1			51.2			49.5	
Approach LOS		D			D			D			D	

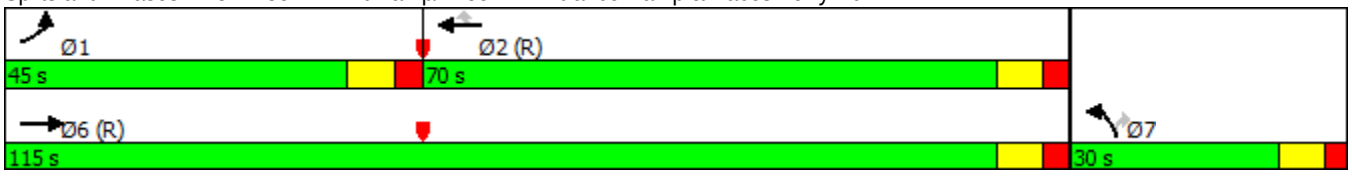
Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

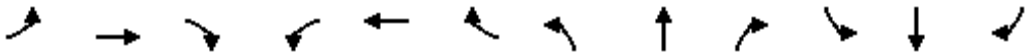
Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	830	937	1022	605	260	280
Future Volume (vph)	830	937	1022	605	260	280
Lane Group Flow (vph)	976	1018	1188	720	329	359
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.99	0.26	0.36	0.44	0.73	0.56
Control Delay	78.5	5.4	28.5	2.6	70.0	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.5	5.4	28.5	2.6	70.0	13.0
Queue Length 50th (ft)	475	91	185	0	156	21
Queue Length 95th (ft)	#606	120	200	21	176	41
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	983	3960	3290	1627	543	701
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.26	0.36	0.44	0.61	0.51

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	830	937	0	0	1022	605	260	0	280	0	0	0
Future Volume (vph)	830	937	0	0	1022	605	260	0	280	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3502		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3502		2814			
Peak-hour factor, PHF	0.85	0.92	0.25	0.25	0.86	0.84	0.79	0.25	0.78	0.25	0.25	0.25
Adj. Flow (vph)	976	1018	0	0	1188	720	329	0	359	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	412	0	0	273	0	0	0
Lane Group Flow (vph)	976	1018	0	0	1188	308	329	0	86	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	40.7	110.7			62.0	62.0	18.8		18.8			
Effective Green, g (s)	40.7	110.7			62.0	62.0	18.8		18.8			
Actuated g/C Ratio	0.28	0.76			0.43	0.43	0.13		0.13			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	982	3960			3290	1215	454		364			
v/s Ratio Prot	c0.28	0.20			c0.15		c0.09					
v/s Ratio Perm						0.11			0.03			
v/c Ratio	0.99	0.26			0.36	0.25	0.72		0.24			
Uniform Delay, d1	52.0	5.0			28.1	26.6	60.6		56.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	27.1	0.2			0.3	0.5	5.7		0.3			
Delay (s)	79.1	5.2			28.4	27.1	66.3		57.0			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		41.4			27.9			61.4			0.0	
Approach LOS		D			C			E			A	

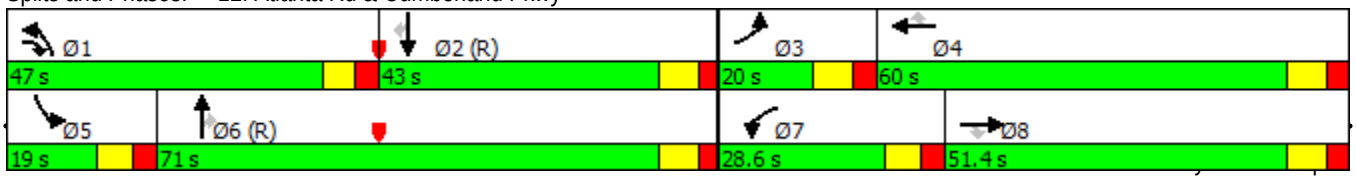
Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

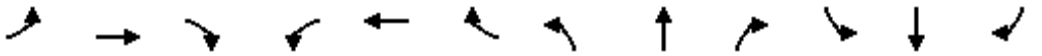
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Future Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Lane Group Flow (vph)	237	414	565	289	1132	181	1191	1009	106	93	751	361
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	20.0	51.4	47.0	28.6	60.0	60.0	47.0	71.0	71.0	19.0	43.0	43.0
Total Split (%)	11.8%	30.2%	27.6%	16.8%	35.3%	35.3%	27.6%	41.8%	41.8%	11.2%	25.3%	25.3%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.98	0.43	0.35	0.75	1.03	0.29	1.01	0.75	0.15	0.79	1.01	0.71
Control Delay	129.4	53.3	16.8	86.1	90.5	7.7	91.0	50.5	0.4	117.7	100.1	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	129.4	53.3	16.8	86.1	90.5	7.7	91.0	50.5	0.4	117.7	100.1	31.3
Queue Length 50th (ft)	138	202	148	163	~703	6	~479	516	0	104	~450	145
Queue Length 95th (ft)	#235	262	193	215	#844	17	#584	602	0	#178	#593	259
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	242	973	1611	434	1104	614	1185	1343	713	122	746	508
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.43	0.35	0.67	1.03	0.29	1.01	0.75	0.15	0.76	1.01	0.71

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 87 (51%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Future Volume (vph)	218	373	497	260	1053	125	1120	959	91	77	676	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.92	0.90	0.88	0.90	0.93	0.69	0.94	0.95	0.86	0.83	0.90	0.88
Adj. Flow (vph)	237	414	565	289	1132	181	1191	1009	106	93	751	361
RTOR Reduction (vph)	0	0	63	0	0	120	0	0	66	0	0	178
Lane Group Flow (vph)	237	414	502	289	1132	61	1191	1009	40	93	751	183
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	45.9	85.9	18.6	52.0	52.0	40.0	63.9	63.9	11.1	35.5	35.5
Effective Green, g (s)	12.0	45.9	85.9	18.6	52.0	52.0	40.0	63.9	63.9	11.1	35.5	35.5
Actuated g/C Ratio	0.07	0.27	0.51	0.11	0.31	0.31	0.24	0.38	0.38	0.07	0.21	0.21
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	242	974	1421	383	1104	494	1185	1343	601	117	746	330
v/s Ratio Prot	0.07	0.11	0.08	c0.08	c0.31		c0.24	0.28		0.05	c0.21	
v/s Ratio Perm			0.10			0.04			0.02			0.12
v/c Ratio	0.98	0.43	0.35	0.75	1.03	0.12	1.01	0.75	0.07	0.79	1.01	0.55
Uniform Delay, d1	78.9	51.2	25.3	73.5	59.0	42.6	65.0	46.1	34.0	78.3	67.2	60.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	51.4	0.3	0.2	8.2	33.7	0.1	27.4	3.9	0.2	30.0	34.6	6.6
Delay (s)	130.3	51.5	25.5	81.7	92.7	42.7	92.4	50.1	34.2	108.3	101.9	66.7
Level of Service	F	D	C	F	F	D	F	D	C	F	F	E
Approach Delay (s)		54.8			85.1			71.2			91.8	
Approach LOS		D			F			E			F	

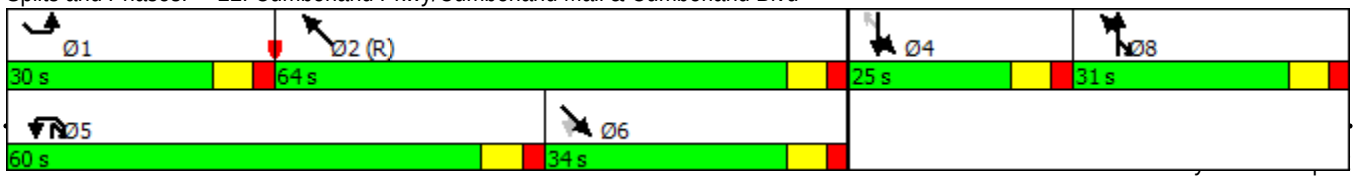
Intersection Summary			
HCM 2000 Control Delay	75.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations											
Traffic Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555
Future Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555
Lane Group Flow (vph)	267	274	684	31	339	155	169	272	545	1214	685
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	8	8	8 5	4	4		1	6		5	2
Permitted Phases						4			6		
Detector Phase	8	8	8 5	4	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	31.0	31.0		25.0	25.0	25.0	30.0	34.0	34.0	60.0	64.0
Total Split (%)	20.7%	20.7%		16.7%	16.7%	16.7%	20.0%	22.7%	22.7%	40.0%	42.7%
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	C-Max
v/c Ratio	0.95	0.94	0.36	0.19	0.82	0.45	0.61	0.44	1.01	0.98	0.50
Control Delay	103.3	101.3	1.6	62.8	81.4	8.6	69.8	57.3	66.2	69.2	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.3	101.3	1.6	62.8	81.4	8.6	69.8	57.3	66.2	69.2	36.9
Queue Length 50th (ft)	277	284	0	28	172	0	157	126	~277	605	267
Queue Length 95th (ft)	#430	#393	25	63	#238	43	201	134	#349	#760	310
Internal Link Dist (ft)		1280			195			880			560
Turn Bay Length (ft)	255		245				220		320	440	
Base Capacity (vph)	281	291	1902	166	428	350	276	624	542	1237	1362
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.94	0.36	0.19	0.79	0.44	0.61	0.44	1.01	0.98	0.50

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 29 (19%), Referenced to phase 2:NWT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555	19
Future Volume (vph)	324	128	602	31	322	147	130	193	425	1141	555	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1715	1768	2842	1388	3574	1583	1805	3471	1615	3502	3578	
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1715	1768	2842	1388	3574	1583	1805	3471	1615	3502	3578	
Peak-hour factor, PHF	0.85	0.80	0.88	1.00	0.95	0.95	0.77	0.71	0.78	0.94	0.86	0.48
Adj. Flow (vph)	381	160	684	31	339	155	169	272	545	1214	645	40
RTOR Reduction (vph)	0	0	298	0	0	137	0	0	252	0	3	0
Lane Group Flow (vph)	267	274	386	31	339	18	169	272	293	1214	682	0
Heavy Vehicles (%)	0%	0%	0%	30%	1%	2%	0%	4%	0%	0%	0%	0%
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	8	8	8 5	4	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	24.7	24.7	84.7	17.3	17.3	17.3	23.0	27.0	27.0	53.0	57.0	
Effective Green, g (s)	24.7	24.7	84.7	17.3	17.3	17.3	23.0	27.0	27.0	53.0	57.0	
Actuated g/C Ratio	0.16	0.16	0.56	0.12	0.12	0.12	0.15	0.18	0.18	0.35	0.38	
Clearance Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	282	291	1604	160	412	182	276	624	290	1237	1359	
v/s Ratio Prot	c0.16	0.15	0.14	0.02	c0.09		0.09	0.08		c0.35	0.19	
v/s Ratio Perm						0.01			c0.18			
v/c Ratio	0.95	0.94	0.24	0.19	0.82	0.10	0.61	0.44	1.01	0.98	0.50	
Uniform Delay, d1	62.0	61.9	16.5	60.0	64.9	59.4	59.3	54.7	61.5	48.0	35.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	39.0	37.3	0.1	0.6	12.5	0.2	9.8	2.2	55.7	21.5	1.3	
Delay (s)	101.0	99.2	16.5	60.6	77.3	59.6	69.1	56.9	117.2	69.5	36.9	
Level of Service	F	F	B	E	E	E	E	E	F	E	D	
Approach Delay (s)		53.4			71.1			92.3			57.8	
Approach LOS		D			E			F			E	

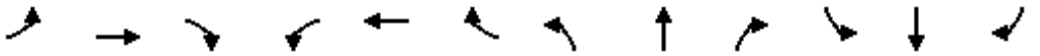
Intersection Summary			
HCM 2000 Control Delay	65.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1366	470	482	1026	390	686
Future Volume (vph)	1366	470	482	1026	390	686
Lane Group Flow (vph)	1607	588	603	1153	424	722
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	52.0	52.0	40.0	92.0	48.0	48.0
Total Split (%)	37.1%	37.1%	28.6%	65.7%	34.3%	34.3%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.55	0.60	0.84	0.35	0.33	0.87
Control Delay	35.8	5.5	64.5	12.7	42.8	51.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	5.5	64.5	12.7	42.8	51.6
Queue Length 50th (ft)	286	0	273	173	110	290
Queue Length 95th (ft)	324	28	286	216	137	364
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	2943	980	825	3307	1472	928
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.60	0.73	0.35	0.29	0.78

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1366	470	482	1026	0	0	0	0	390	0	686
Future Volume (vph)	0	1366	470	482	1026	0	0	0	0	390	0	686
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1615	3502	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1615	3502	5187					5090		2842
Peak-hour factor, PHF	0.25	0.85	0.80	0.80	0.89	0.25	0.25	0.25	0.25	0.92	0.25	0.95
Adj. Flow (vph)	0	1607	588	602	1153	0	0	0	0	424	0	722
RTOR Reduction (vph)	0	0	363	0	0	0	0	0	0	0	0	112
Lane Group Flow (vph)	0	1607	225	603	1153	0	0	0	0	424	0	610
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		53.6	53.6	28.7	89.3					35.2		35.2
Effective Green, g (s)		53.6	53.6	28.7	89.3					35.2		35.2
Actuated g/C Ratio		0.38	0.38	0.20	0.64					0.25		0.25
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		2946	618	717	3308					1279		714
v/s Ratio Prot		c0.21		c0.17	0.22							
v/s Ratio Perm			0.14							0.08		c0.21
v/c Ratio		0.55	0.36	0.84	0.35					0.33		0.85
Uniform Delay, d1		33.7	31.0	53.5	11.8					42.8		50.0
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.7	1.7	8.8	0.3					0.2		9.8
Delay (s)		34.4	32.6	62.3	12.1					42.9		59.8
Level of Service		C	C	E	B					D		E
Approach Delay (s)		33.9			29.3			0.0			53.6	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	11	0	195	2	1617	1	60	605	2
Future Volume (Veh/h)	1	0	1	11	0	195	2	1617	1	60	605	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.50	0.25	0.82	0.50	0.86	0.25	0.68	0.90	0.50
Hourly flow rate (vph)	4	0	4	22	0	238	4	1880	4	88	672	4
Pedestrians								3				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								3.5				
Percent Blockage								0				
Right turn flare (veh)						6						
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								820			1045	
pX, platoon unblocked	0.64	0.64		0.64	0.64	0.64				0.64		
vC, conflicting volume	1915	2740	339	2409	2742	942	676			1884		
vC1, stage 1 conf vol	848	848		1890	1890							
vC2, stage 2 conf vol	1067	1892		519	852							
vCu, unblocked vol	1293	2591	339	2070	2594	0	676			1244		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	80	100	66	100			76		
cM capacity (veh/h)	197	64	661	109	130	691	925			360		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	8	260	4	1253	631	88	336	336	4
Volume Left	4	22	4	0	0	88	0	0	0
Volume Right	4	238	0	0	4	0	0	0	4
cSH	303	755	925	1700	1700	360	1700	1700	1700
Volume to Capacity	0.03	0.34	0.00	0.74	0.37	0.24	0.20	0.20	0.00
Queue Length 95th (ft)	2	38	0	0	0	24	0	0	0
Control Delay (s)	17.2	15.7	8.9	0.0	0.0	18.2	0.0	0.0	0.0
Lane LOS	C	C	A			C			
Approach Delay (s)	17.2	15.7	0.0			2.1			
Approach LOS	C	C							

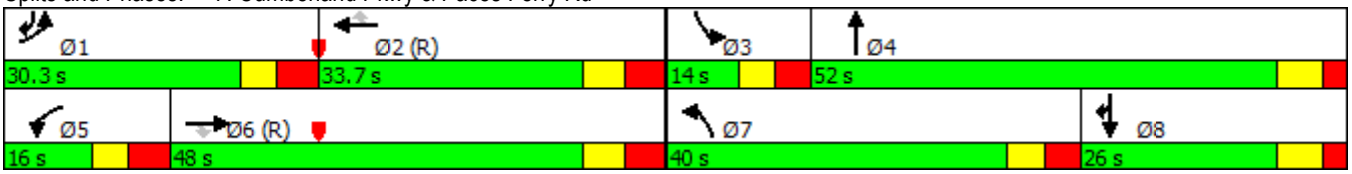
Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	70.1%	ICU Level of Service		C
Analysis Period (min)	15			

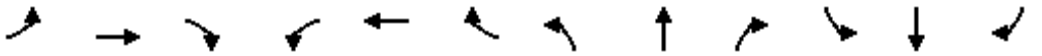
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	578	819	584	154	409	91	618	1059	75	283	176
Future Volume (vph)	578	819	584	154	409	91	618	1059	75	283	176
Lane Group Flow (vph)	642	910	664	166	454	110	792	1727	81	331	176
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4	3	8	8 1
Permitted Phases			6			2					
Detector Phase	1	6	6	5	2	2	7	4	3	8	8 1
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	12.0	25.0	
Total Split (s)	30.3	48.0	48.0	16.0	33.7	33.7	40.0	52.0	14.0	26.0	
Total Split (%)	23.3%	36.9%	36.9%	12.3%	25.9%	25.9%	30.8%	40.0%	10.8%	20.0%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	Max	
v/c Ratio	0.78	0.82	0.50	0.75	0.42	0.20	0.92	0.98	0.84	0.47	0.16
Control Delay	59.4	48.9	3.8	80.2	46.2	0.8	64.5	56.5	115.1	52.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	48.9	3.8	80.2	46.2	0.8	64.5	56.5	115.1	52.1	5.6
Queue Length 50th (ft)	183	373	0	72	123	0	333	506	69	104	5
Queue Length 95th (ft)	227	456	40	#125	161	0	342	518	#165	144	34
Internal Link Dist (ft)		610			246			250		395	
Turn Bay Length (ft)	455		425	400		100			215		300
Base Capacity (vph)	892	1110	1325	222	1085	553	888	1770	97	698	1110
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.82	0.50	0.75	0.42	0.20	0.89	0.98	0.84	0.47	0.16

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 115 (88%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	819	584	154	409	91	618	1059	345	75	283	176
Future Volume (vph)	578	819	584	154	409	91	618	1059	345	75	283	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	0.88	0.97	0.91	1.00	0.97	0.91		1.00	0.81	0.81
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	5090	3610	2814	3400	5136	1583	3502	4964		1805	4491	2616
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	5090	3610	2814	3400	5136	1583	3502	4964		1805	4491	2616
Peak-hour factor, PHF	0.90	0.90	0.88	0.93	0.90	0.83	0.78	0.84	0.74	0.93	0.91	0.90
Adj. Flow (vph)	642	910	664	166	454	110	792	1261	466	81	311	196
RTOR Reduction (vph)	0	0	460	0	0	87	0	51	0	0	5	100
Lane Group Flow (vph)	642	910	204	166	454	23	792	1676	0	81	326	76
Heavy Vehicles (%)	0%	0%	1%	3%	1%	2%	0%	0%	1%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2						
Actuated Green, G (s)	21.0	40.0	40.0	8.5	27.5	27.5	31.9	45.0		7.0	20.1	48.1
Effective Green, g (s)	21.0	40.0	40.0	8.5	27.5	27.5	31.9	45.0		7.0	20.1	48.1
Actuated g/C Ratio	0.16	0.31	0.31	0.07	0.21	0.21	0.25	0.35		0.05	0.15	0.37
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	822	1110	865	222	1086	334	859	1718		97	694	967
v/s Ratio Prot	c0.13	c0.25		0.05	0.09		c0.23	c0.34		0.04	0.07	0.03
v/s Ratio Perm			0.07			0.01						
v/c Ratio	0.78	0.82	0.24	0.75	0.42	0.07	0.92	0.98		0.84	0.47	0.08
Uniform Delay, d1	52.3	41.7	33.6	59.7	44.3	41.0	47.8	42.0		60.9	50.1	26.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	6.8	0.6	12.9	1.2	0.4	15.1	16.6		43.2	2.3	0.0
Delay (s)	57.1	48.5	34.2	72.6	45.5	41.4	62.9	58.6		104.2	52.4	26.6
Level of Service	E	D	C	E	D	D	E	E		F	D	C
Approach Delay (s)		46.7			51.0			60.0			51.8	
Approach LOS		D			D			E			D	

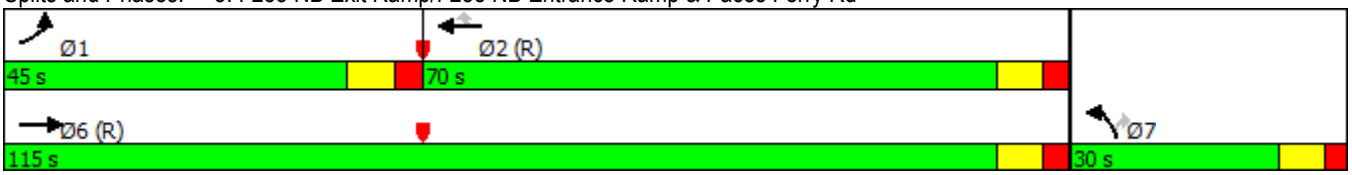
Intersection Summary			
HCM 2000 Control Delay	53.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

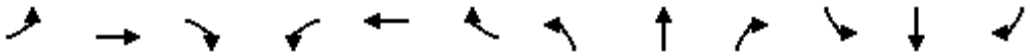
Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	673	1808	630	565	250	265
Future Volume (vph)	673	1808	630	565	250	265
Lane Group Flow (vph)	716	1965	733	734	313	305
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.88	0.49	0.20	0.42	0.72	0.69
Control Delay	65.9	7.0	22.8	2.4	70.4	49.2
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	65.9	7.4	22.8	2.4	70.4	49.2
Queue Length 50th (ft)	336	224	98	0	148	107
Queue Length 95th (ft)	404	286	121	0	170	152
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	898	3980	3682	1742	537	519
Starvation Cap Reductn	0	1203	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.71	0.20	0.42	0.58	0.59

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 110 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	673	1808	0	0	630	565	250	0	265	0	0	0
Future Volume (vph)	673	1808	0	0	630	565	250	0	265	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3467		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3467		2814			
Peak-hour factor, PHF	0.94	0.92	0.25	0.25	0.86	0.77	0.80	0.25	0.87	0.25	0.25	0.25
Adj. Flow (vph)	716	1965	0	0	733	734	312	0	305	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	383	0	0	86	0	0	0
Lane Group Flow (vph)	716	1965	0	0	733	351	313	0	219	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	33.9	111.3			69.4	69.4	18.2		18.2			
Effective Green, g (s)	33.9	111.3			69.4	69.4	18.2		18.2			
Actuated g/C Ratio	0.23	0.77			0.48	0.48	0.13		0.13			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	818	3981			3682	1360	435		353			
v/s Ratio Prot	c0.20	c0.38			0.10		c0.09					
v/s Ratio Perm						0.12			0.08			
v/c Ratio	0.88	0.49			0.20	0.26	0.72		0.62			
Uniform Delay, d1	53.5	6.3			21.8	22.5	60.9		60.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	10.3	0.4			0.1	0.5	5.6		3.4			
Delay (s)	63.8	6.7			21.9	22.9	66.6		63.5			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		22.0			22.4			65.1			0.0	
Approach LOS		C			C			E			A	

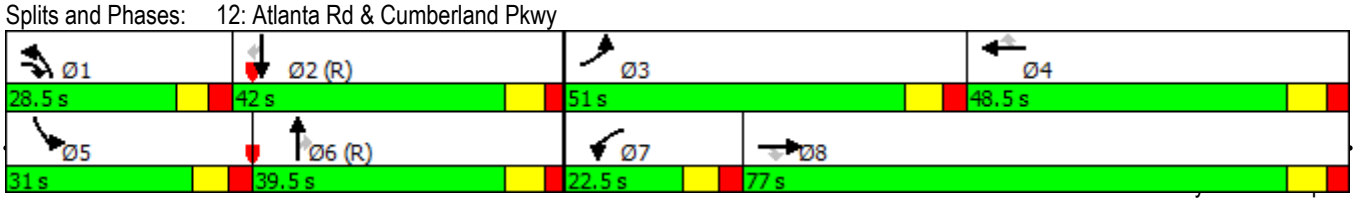
Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

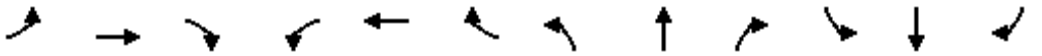
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	1284	1230	229	235	152	502	447	171	176	684	173
Future Volume (vph)	565	1284	1230	229	235	152	502	447	171	176	684	173
Lane Group Flow (vph)	673	1493	1268	294	276	200	570	552	238	241	705	199
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	51.0	77.0	28.5	22.5	48.5	48.5	28.5	39.5	39.5	31.0	42.0	42.0
Total Split (%)	30.0%	45.3%	16.8%	13.2%	28.5%	28.5%	16.8%	23.2%	23.2%	18.2%	24.7%	24.7%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.88	1.02	0.76	0.95	0.29	0.35	0.89	0.82	0.54	0.97	0.97	0.43
Control Delay	76.8	77.5	28.9	115.7	51.3	7.7	90.3	77.3	21.9	120.3	93.6	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.8	77.5	28.9	115.7	51.3	7.7	90.3	77.3	21.9	120.3	93.6	13.6
Queue Length 50th (ft)	375	~923	557	171	130	0	225	315	59	271	415	21
Queue Length 95th (ft)	401	#974	661	#209	170	29	#279	341	79	#317	#548	88
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	868	1465	1662	309	965	578	637	672	443	249	725	461
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	1.02	0.76	0.95	0.29	0.35	0.89	0.82	0.54	0.97	0.97	0.43

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 91 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	1284	1230	229	235	152	502	447	171	176	684	173
Future Volume (vph)	565	1284	1230	229	235	152	502	447	171	176	684	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.84	0.86	0.97	0.78	0.85	0.76	0.88	0.81	0.72	0.73	0.97	0.87
Adj. Flow (vph)	673	1493	1268	294	276	200	570	552	238	241	705	199
RTOR Reduction (vph)	0	0	36	0	0	146	0	0	143	0	0	140
Lane Group Flow (vph)	673	1493	1232	294	276	54	570	552	95	241	705	59
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	38.0	69.0	90.5	15.0	45.5	45.5	21.5	32.0	32.0	23.5	34.5	34.5
Effective Green, g (s)	38.0	69.0	90.5	15.0	45.5	45.5	21.5	32.0	32.0	23.5	34.5	34.5
Actuated g/C Ratio	0.22	0.41	0.53	0.09	0.27	0.27	0.13	0.19	0.19	0.14	0.20	0.20
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	767	1465	1498	309	966	432	637	672	300	249	725	321
v/s Ratio Prot	c0.20	c0.41	0.10	0.08	0.08		0.11	0.15		c0.13	c0.20	
v/s Ratio Perm			0.33			0.03			0.06			0.04
v/c Ratio	0.88	1.02	0.82	0.95	0.29	0.12	0.89	0.82	0.32	0.97	0.97	0.18
Uniform Delay, d1	63.8	50.5	33.1	77.1	49.4	47.2	73.1	66.3	59.6	72.9	67.3	56.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.1	28.4	3.8	38.2	0.2	0.1	15.0	10.9	2.8	47.5	27.3	1.3
Delay (s)	74.8	78.9	36.8	115.3	49.5	47.3	88.2	77.1	62.3	120.4	94.6	57.3
Level of Service	E	E	D	F	D	D	F	E	E	F	F	E
Approach Delay (s)		62.6			74.1			79.2			93.6	
Approach LOS		E			E			E			F	

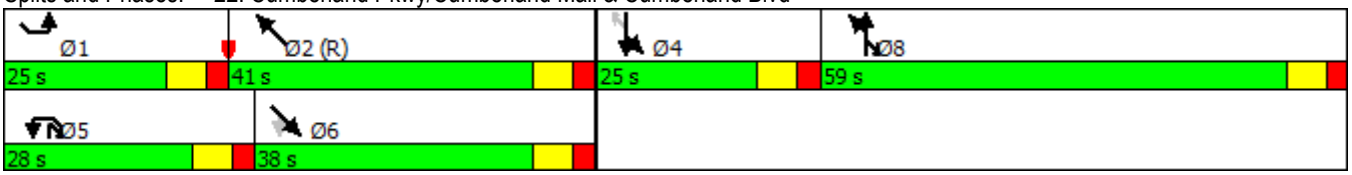
Intersection Summary			
HCM 2000 Control Delay	72.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

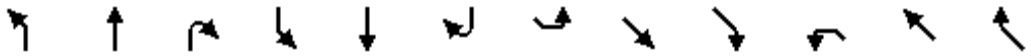
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations											
Traffic Volume (vph)	374	93	1338	2	25	13	50	497	328	320	95
Future Volume (vph)	374	93	1338	2	25	13	50	497	328	320	95
Lane Group Flow (vph)	259	268	1538	4	44	19	70	552	373	364	125
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	8	8	8 5	4	4		1	6		5	2
Permitted Phases						4			6		
Detector Phase	8	8	8 5	4	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	59.0	59.0		25.0	25.0	25.0	25.0	38.0	38.0	28.0	41.0
Total Split (%)	39.3%	39.3%		16.7%	16.7%	16.7%	16.7%	25.3%	25.3%	18.7%	27.3%
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	C-Max
v/c Ratio	0.41	0.42	0.76	0.05	0.27	0.10	0.20	0.74	0.59	0.50	0.16
Control Delay	36.5	36.6	13.2	68.0	72.3	1.0	59.7	62.6	8.8	58.8	45.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	36.6	13.2	68.0	72.3	1.0	59.7	62.6	8.8	58.8	45.2
Queue Length 50th (ft)	182	188	344	4	22	0	64	268	0	178	50
Queue Length 95th (ft)	267	209	417	9	27	0	90	337	81	230	72
Internal Link Dist (ft)		1280			195			880			560
Turn Bay Length (ft)	255		245				220		320	440	
Base Capacity (vph)	665	679	2033	216	401	288	342	746	629	734	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.39	0.76	0.02	0.11	0.07	0.20	0.74	0.59	0.50	0.16

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 17 (11%), Referenced to phase 2:NWT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd





Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	374	93	1338	2	25	13	50	497	328	320	95	7
Future Volume (vph)	374	93	1338	2	25	13	50	497	328	320	95	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1715	1751	2842	1805	3343	1442	1805	3610	1615	3502	3506	
Flt Permitted	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1715	1751	2842	1805	3343	1442	1805	3610	1615	3502	3506	
Peak-hour factor, PHF	0.94	0.72	0.87	0.50	0.57	0.69	0.71	0.90	0.88	0.88	0.82	0.75
Adj. Flow (vph)	398	129	1538	4	44	19	70	552	373	364	116	9
RTOR Reduction (vph)	0	0	269	0	0	18	0	0	299	0	4	0
Lane Group Flow (vph)	259	268	1269	4	44	1	70	552	74	364	121	0
Heavy Vehicles (%)	0%	1%	0%	0%	8%	12%	0%	0%	0%	0%	2%	0%
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	8	8	8 5	4	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	54.7	54.7	93.1	6.3	6.3	6.3	28.4	29.6	29.6	31.4	32.6	
Effective Green, g (s)	54.7	54.7	93.1	6.3	6.3	6.3	28.4	29.6	29.6	31.4	32.6	
Actuated g/C Ratio	0.36	0.36	0.62	0.04	0.04	0.04	0.19	0.20	0.20	0.21	0.22	
Clearance Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	625	638	1763	75	140	60	341	712	318	733	761	
v/s Ratio Prot	0.15	0.15	c0.45	0.00	c0.01		0.04	c0.15		0.10	c0.03	
v/s Ratio Perm						0.00			0.05			
v/c Ratio	0.41	0.42	0.72	0.05	0.31	0.01	0.21	0.78	0.23	0.50	0.16	
Uniform Delay, d1	35.7	35.7	19.5	69.0	69.8	68.9	51.3	57.0	50.6	52.3	47.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.4	1.4	0.3	1.3	0.1	1.4	8.1	1.7	2.4	0.4	
Delay (s)	36.1	36.2	20.9	69.3	71.0	69.0	52.6	65.1	52.3	54.7	48.0	
Level of Service	D	D	C	E	E	E	D	E	D	D	D	
Approach Delay (s)		24.8			70.3			59.5			53.0	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	187	231	1351	222	292	361
Future Volume (vph)	187	231	1351	222	292	361
Lane Group Flow (vph)	203	251	1468	241	317	392
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases		4		2	6	
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	27.0	27.0	71.0	71.0	32.0	103.0
Total Split (%)	20.8%	20.8%	54.6%	54.6%	24.6%	79.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
v/c Ratio	0.70	0.54	0.81	0.26	0.78	0.15
Control Delay	59.7	10.3	27.0	2.8	42.9	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	10.3	27.0	2.8	42.9	4.1
Queue Length 50th (ft)	144	0	447	0	166	35
Queue Length 95th (ft)	248	75	628	41	292	55
Internal Link Dist (ft)	257		390			740
Turn Bay Length (ft)				400	250	
Base Capacity (vph)	390	545	2310	1117	537	3092
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.46	0.64	0.22	0.59	0.13

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 107.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 23: Cumberland Pkwy & Vinings ATL Dwy #1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	187	231	1351	222	292	361
Future Volume (vph)	187	231	1351	222	292	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	3539	1583	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.07	1.00
Satd. Flow (perm)	1770	1583	3539	1583	124	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	203	251	1468	241	317	392
RTOR Reduction (vph)	0	210	0	116	0	0
Lane Group Flow (vph)	203	41	1468	125	317	392
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	17.7	17.7	55.5	55.5	80.6	80.6
Effective Green, g (s)	17.7	17.7	55.5	55.5	80.6	80.6
Actuated g/C Ratio	0.16	0.16	0.52	0.52	0.75	0.75
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	291	261	1830	818	409	2658
v/s Ratio Prot	c0.11		0.41		c0.15	0.11
v/s Ratio Perm		0.03		0.08	c0.43	
v/c Ratio	0.70	0.16	0.80	0.15	0.78	0.15
Uniform Delay, d1	42.3	38.4	21.4	13.6	30.9	3.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.1	0.3	2.6	0.1	8.9	0.0
Delay (s)	49.4	38.7	24.0	13.7	39.8	3.8
Level of Service	D	D	C	B	D	A
Approach Delay (s)	43.5		22.5			19.9
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	107.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

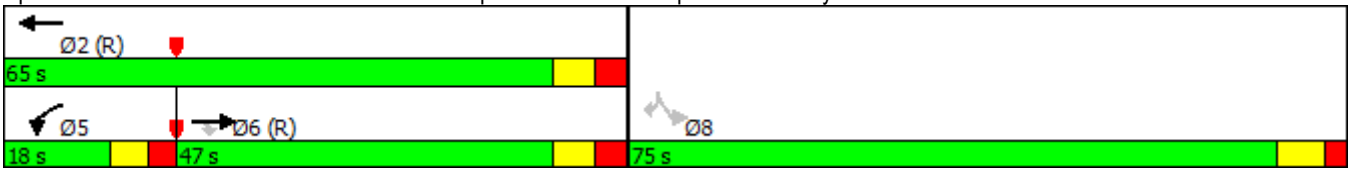
c Critical Lane Group

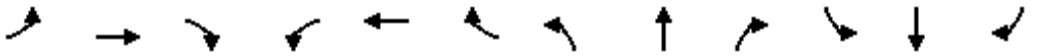
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1619	378	232	642	884	1315
Future Volume (vph)	1619	378	232	642	884	1315
Lane Group Flow (vph)	1861	434	258	705	940	1445
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	47.0	47.0	18.0	65.0	75.0	75.0
Total Split (%)	33.6%	33.6%	12.9%	46.4%	53.6%	53.6%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.87	0.59	0.96	0.33	0.38	0.98
Control Delay	53.4	8.7	108.9	29.0	23.6	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	8.7	108.9	29.0	23.6	50.7
Queue Length 50th (ft)	400	20	122	160	189	659
Queue Length 95th (ft)	420	98	#212	194	223	#859
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	2143	736	269	2111	2454	1470
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.59	0.96	0.33	0.38	0.98

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 48 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1619	378	232	642	0	0	0	0	884	0	1315
Future Volume (vph)	0	1619	378	232	642	0	0	0	0	884	0	1315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1599	3433	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1599	3433	5187					5090		2842
Peak-hour factor, PHF	0.25	0.87	0.87	0.90	0.91	0.25	0.25	0.25	0.25	0.94	0.25	0.91
Adj. Flow (vph)	0	1861	434	258	705	0	0	0	0	940	0	1445
RTOR Reduction (vph)	0	0	291	0	0	0	0	0	0	0	0	100
Lane Group Flow (vph)	0	1861	143	258	705	0	0	0	0	940	0	1345
Heavy Vehicles (%)	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		39.0	39.0	11.0	57.0					67.5		67.5
Effective Green, g (s)		39.0	39.0	11.0	57.0					67.5		67.5
Actuated g/C Ratio		0.28	0.28	0.08	0.41					0.48		0.48
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		2143	445	269	2111					2454		1370
v/s Ratio Prot		c0.24		c0.08	0.14							
v/s Ratio Perm			0.09							0.18		c0.47
v/c Ratio		0.87	0.32	0.96	0.33					0.38		0.98
Uniform Delay, d1		48.1	40.0	64.3	28.5					23.0		35.6
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		5.1	1.9	43.2	0.4					0.1		19.9
Delay (s)		53.2	41.9	107.4	28.9					23.1		55.5
Level of Service		D	D	F	C					C		E
Approach Delay (s)		51.0			49.9			0.0			42.8	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	45	16	0	193	13	0
Future Volume (Veh/h)	45	16	0	193	13	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	17	0	210	14	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			66		268	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			66		268	58
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	100
cM capacity (veh/h)			1536		722	1009

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	66	210	14
Volume Left	0	0	14
Volume Right	17	0	0
cSH	1700	1536	722
Volume to Capacity	0.04	0.00	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	10.1
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.1
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	4	1568	11	0	549
Future Volume (Veh/h)	0	4	1568	11	0	549
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	4	1704	12	0	597
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						470
pX, platoon unblocked	0.98					
vC, conflicting volume	2008	858			1716	
vC1, stage 1 conf vol	1710					
vC2, stage 2 conf vol	298					
vCu, unblocked vol	1993	858			1716	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	127	300			365	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	4	1136	580	0	298	298
Volume Left	0	0	0	0	0	0
Volume Right	4	0	12	0	0	0
cSH	300	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.67	0.34	0.00	0.18	0.18
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	17.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	17.2	0.0		0.0		
Approach LOS	C					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	0	5	16	0	73	0	915	7	191	1835	5
Future Volume (Veh/h)	2	0	5	16	0	73	0	915	7	191	1835	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.25	0.31	0.47	0.25	0.76	0.25	0.93	0.44	0.78	0.97	0.62
Hourly flow rate (vph)	4	0	16	34	0	96	0	984	16	245	1892	8
Pedestrians								3			3	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)						6						
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								820			1045	
pX, platoon unblocked	0.54	0.54	0.47	0.54	0.54	0.87	0.47			0.87		
vC, conflicting volume	2925	3382	949	2447	3382	503	1900			1000		
vC1, stage 1 conf vol	2382	2382		992	992							
vC2, stage 2 conf vol	543	1000		1455	2390							
vCu, unblocked vol	1808	2659	0	917	2659	145	679			713		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	97	86	100	88	100			69		
cM capacity (veh/h)	31	45	516	248	46	770	437			784		

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3	SW 4
Volume Total	20	130	0	656	344	245	946	946	8
Volume Left	4	34	0	0	0	245	0	0	0
Volume Right	16	96	0	0	16	0	0	0	8
cSH	126	947	1700	1700	1700	784	1700	1700	1700
Volume to Capacity	0.16	0.14	0.00	0.39	0.20	0.31	0.56	0.56	0.00
Queue Length 95th (ft)	14	12	0	0	0	33	0	0	0
Control Delay (s)	39.0	13.3	0.0	0.0	0.0	11.7	0.0	0.0	0.0
Lane LOS	E	B				B			
Approach Delay (s)	39.0	13.3	0.0			1.3			
Approach LOS	E	B							

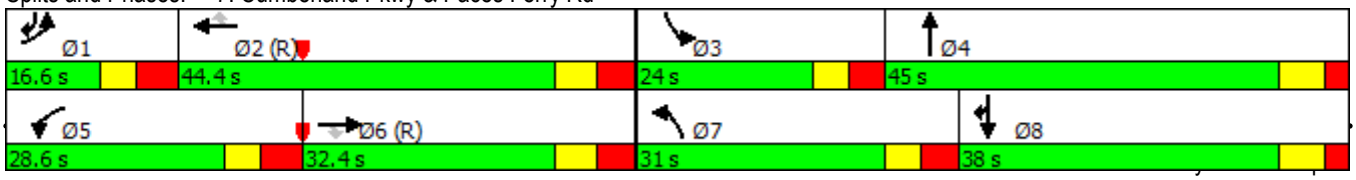
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	67.4%	ICU Level of Service		C
Analysis Period (min)	15			

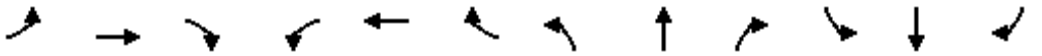
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	224	493	714	488	956	92	514	482	110	914	414
Future Volume (vph)	224	493	714	488	956	92	514	482	110	914	414
Lane Group Flow (vph)	264	519	830	530	1166	110	635	799	126	1096	510
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4	3	8	8 1
Permitted Phases			6			2					
Detector Phase	1	6	6	5	2	2	7	4	3	8	8 1
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.5	26.0	26.0	12.5	26.0	26.0	12.0	25.0	12.0	25.0	
Total Split (s)	16.6	32.4	32.4	28.6	44.4	44.4	31.0	45.0	24.0	38.0	
Total Split (%)	12.8%	24.9%	24.9%	22.0%	34.2%	34.2%	23.8%	34.6%	18.5%	29.2%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.5	3.5	4.5	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	2.5	3.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	Max	
v/c Ratio	0.75	0.77	0.86	0.93	0.80	0.20	0.98	0.49	0.66	1.00	0.48
Control Delay	73.2	58.5	27.8	78.4	48.5	2.4	84.2	33.2	71.8	76.5	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.2	58.5	27.8	78.4	48.5	2.4	84.2	33.2	71.8	76.5	22.5
Queue Length 50th (ft)	78	220	145	229	335	0	277	177	103	~381	135
Queue Length 95th (ft)	104	285	210	#335	347	9	#331	220	162	#481	138
Internal Link Dist (ft)		610			246			250		395	
Turn Bay Length (ft)	455		425	400		100			215		300
Base Capacity (vph)	352	678	964	568	1452	563	646	1628	236	1095	1061
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.77	0.86	0.93	0.80	0.20	0.98	0.49	0.53	1.00	0.48

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 13 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Cumberland Pkwy & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	493	714	488	956	92	514	482	198	110	914	414
Future Volume (vph)	224	493	714	488	956	92	514	482	198	110	914	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	0.94	0.95	0.88	0.97	0.91	1.00	0.97	0.91		1.00	0.81	0.81
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	5040	3610	2814	3502	5187	1615	3502	4943		1805	4581	2616
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	5040	3610	2814	3502	5187	1615	3502	4943		1805	4581	2616
Peak-hour factor, PHF	0.85	0.95	0.86	0.92	0.82	0.84	0.81	0.88	0.79	0.87	0.88	0.73
Adj. Flow (vph)	264	519	830	530	1166	110	635	548	251	126	1039	567
RTOR Reduction (vph)	0	0	436	0	0	79	0	61	0	0	4	105
Lane Group Flow (vph)	264	519	394	530	1166	31	635	738	0	126	1092	405
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	1	6		5	2		7	4		3	8	8 1
Permitted Phases			6			2						
Actuated Green, G (s)	9.1	24.4	24.4	21.1	36.4	36.4	24.0	41.2		13.8	31.0	47.1
Effective Green, g (s)	9.1	24.4	24.4	21.1	36.4	36.4	24.0	41.2		13.8	31.0	47.1
Actuated g/C Ratio	0.07	0.19	0.19	0.16	0.28	0.28	0.18	0.32		0.11	0.24	0.36
Clearance Time (s)	7.5	8.0	8.0	7.5	8.0	8.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	352	677	528	568	1452	452	646	1566		191	1092	947
v/s Ratio Prot	0.05	0.14		c0.15	c0.22		c0.18	0.15		0.07	c0.24	0.15
v/s Ratio Perm			0.14			0.02						
v/c Ratio	0.75	0.77	0.75	0.93	0.80	0.07	0.98	0.47		0.66	1.00	0.43
Uniform Delay, d1	59.3	50.1	49.9	53.8	43.5	34.4	52.8	35.6		55.8	49.5	31.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.7	8.1	9.3	22.5	4.8	0.3	30.9	1.0		8.0	27.3	0.3
Delay (s)	68.0	58.2	59.1	76.2	48.3	34.6	83.7	36.7		63.8	76.8	31.6
Level of Service	E	E	E	E	D	C	F	D		E	E	C
Approach Delay (s)		60.3			55.6			57.5			62.5	
Approach LOS		E			E			E			E	

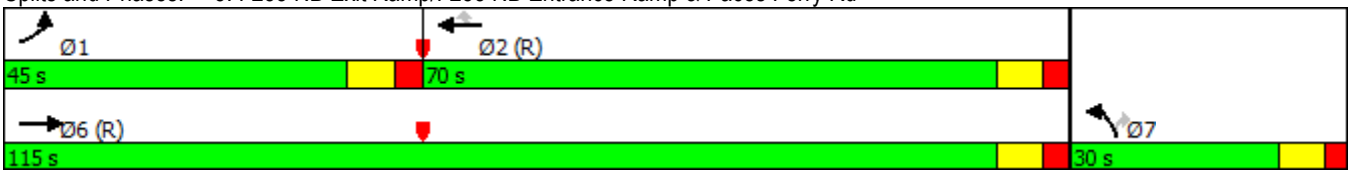
Intersection Summary			
HCM 2000 Control Delay	59.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.5
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

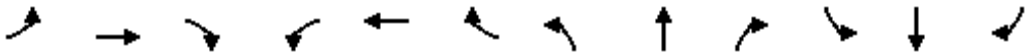
Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	830	1102	1022	787	260	280
Future Volume (vph)	830	1102	1022	787	260	280
Lane Group Flow (vph)	976	1198	1188	937	329	359
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		7	
Permitted Phases				2		7
Detector Phase	1	6	2	2	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	26.0	26.0	12.5	12.5
Total Split (s)	45.0	115.0	70.0	70.0	30.0	30.0
Total Split (%)	31.0%	79.3%	48.3%	48.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.5	7.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.99	0.30	0.36	0.57	0.73	0.64
Control Delay	78.5	5.7	28.5	7.5	70.0	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.5	5.7	28.5	7.5	70.0	27.0
Queue Length 50th (ft)	475	112	185	67	156	66
Queue Length 95th (ft)	#606	146	200	97	176	88
Internal Link Dist (ft)		660	610			
Turn Bay Length (ft)	520			320		
Base Capacity (vph)	983	3960	3290	1634	543	626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.30	0.36	0.57	0.61	0.57

Intersection Summary

Cycle Length: 145
Actuated Cycle Length: 145
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: I-285 NB Exit Ramp/I-285 NB Entrance Ramp & Paces Ferry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	830	1102	0	0	1022	787	260	0	280	0	0	0
Future Volume (vph)	830	1102	0	0	1022	787	260	0	280	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Lane Util. Factor	0.97	0.91			0.81	0.88	0.97		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	3502	5187			7695	2842	3502		2814			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	3502	5187			7695	2842	3502		2814			
Peak-hour factor, PHF	0.85	0.92	0.25	0.25	0.86	0.84	0.79	0.25	0.78	0.25	0.25	0.25
Adj. Flow (vph)	976	1198	0	0	1188	937	329	0	359	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	419	0	0	196	0	0	0
Lane Group Flow (vph)	976	1198	0	0	1188	518	329	0	163	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	1	6			2		7					
Permitted Phases						2			7			
Actuated Green, G (s)	40.7	110.7			62.0	62.0	18.8		18.8			
Effective Green, g (s)	40.7	110.7			62.0	62.0	18.8		18.8			
Actuated g/C Ratio	0.28	0.76			0.43	0.43	0.13		0.13			
Clearance Time (s)	8.0	8.0			8.0	8.0	7.5		7.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	982	3960			3290	1215	454		364			
v/s Ratio Prot	c0.28	0.23			0.15		c0.09					
v/s Ratio Perm						c0.18			0.06			
v/c Ratio	0.99	0.30			0.36	0.43	0.72		0.45			
Uniform Delay, d1	52.0	5.3			28.1	29.1	60.6		58.3			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	27.1	0.2			0.3	1.1	5.7		0.9			
Delay (s)	79.1	5.5			28.4	30.1	66.3		59.2			
Level of Service	E	A			C	C	E		E			
Approach Delay (s)		38.5			29.2			62.6			0.0	
Approach LOS		D			C			E			A	

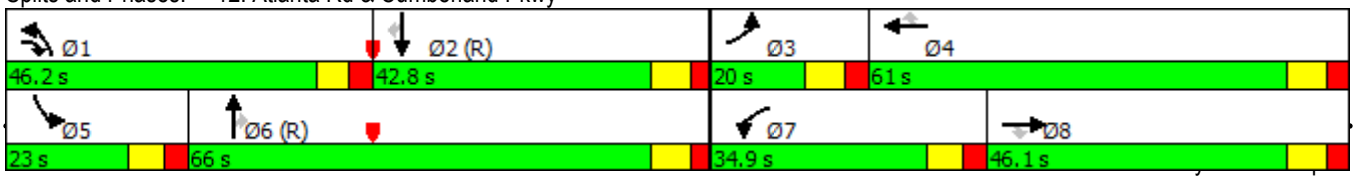
Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

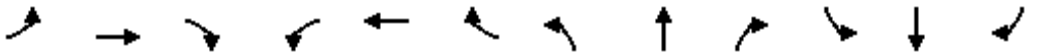
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	403	497	355	1086	154	1120	959	178	103	676	318
Future Volume (vph)	218	403	497	355	1086	154	1120	959	178	103	676	318
Lane Group Flow (vph)	237	448	565	394	1168	223	1191	1009	207	124	751	361
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	1	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.0	26.0	12.5	12.5	26.0	26.0	12.5	26.0	26.0	13.0	26.0	26.0
Total Split (s)	20.0	46.1	46.2	34.9	61.0	61.0	46.2	66.0	66.0	23.0	42.8	42.8
Total Split (%)	11.8%	27.1%	27.2%	20.5%	35.9%	35.9%	27.2%	38.8%	38.8%	13.5%	25.2%	25.2%
Yellow Time (s)	5.0	5.0	4.0	4.5	5.0	5.0	4.0	5.0	5.0	4.5	5.0	5.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.98	0.51	0.37	0.80	1.04	0.36	1.02	0.81	0.31	0.81	1.01	0.71
Control Delay	129.4	58.3	19.1	83.7	93.0	12.8	95.8	56.4	8.7	109.8	101.3	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	129.4	58.3	19.1	83.7	93.0	12.8	95.8	56.4	8.7	109.8	101.3	31.5
Queue Length 50th (ft)	138	229	159	222	~734	40	~498	542	20	137	~454	145
Queue Length 95th (ft)	#235	296	210	278	#875	47	#593	632	72	#209	#595	259
Internal Link Dist (ft)		536			1195			492			397	
Turn Bay Length (ft)	265		300	290		260	325		140	360		170
Base Capacity (vph)	242	885	1532	564	1125	622	1162	1249	676	164	742	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.51	0.37	0.70	1.04	0.36	1.02	0.81	0.31	0.76	1.01	0.71

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 87 (51%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Atlanta Rd & Cumberland Pkwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	218	403	497	355	1086	154	1120	959	178	103	676	318
Future Volume (vph)	218	403	497	355	1086	154	1120	959	178	103	676	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Lane Util. Factor	0.97	0.95	0.88	0.97	0.95	1.00	0.94	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3610	2814	3502	3610	1615	5040	3574	1599	1805	3574	1583
Peak-hour factor, PHF	0.92	0.90	0.88	0.90	0.93	0.69	0.94	0.95	0.86	0.83	0.90	0.88
Adj. Flow (vph)	237	448	565	394	1168	223	1191	1009	207	124	751	361
RTOR Reduction (vph)	0	0	67	0	0	119	0	0	117	0	0	178
Lane Group Flow (vph)	237	448	498	394	1168	104	1191	1009	90	124	751	183
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	1%	1%	1%	0%	1%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	1	7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	41.7	80.9	23.8	53.0	53.0	39.2	59.4	59.4	14.6	35.3	35.3
Effective Green, g (s)	12.0	41.7	80.9	23.8	53.0	53.0	39.2	59.4	59.4	14.6	35.3	35.3
Actuated g/C Ratio	0.07	0.25	0.48	0.14	0.31	0.31	0.23	0.35	0.35	0.09	0.21	0.21
Clearance Time (s)	8.0	8.0	7.0	7.5	8.0	8.0	7.0	7.5	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	242	885	1339	490	1125	503	1162	1248	558	155	742	328
v/s Ratio Prot	0.07	0.12	0.09	c0.11	c0.32		c0.24	0.28		0.07	c0.21	
v/s Ratio Perm			0.09			0.06			0.06			0.12
v/c Ratio	0.98	0.51	0.37	0.80	1.04	0.21	1.02	0.81	0.16	0.80	1.01	0.56
Uniform Delay, d1	78.9	55.3	28.4	70.8	58.5	43.0	65.4	50.1	38.1	76.3	67.3	60.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	51.4	0.5	0.2	9.3	37.3	0.2	32.9	5.7	0.6	24.8	36.1	6.7
Delay (s)	130.3	55.7	28.5	80.1	95.8	43.2	98.3	55.9	38.7	101.0	103.4	67.0
Level of Service	F	E	C	F	F	D	F	E	D	F	F	E
Approach Delay (s)		57.6			85.7			75.4			92.6	
Approach LOS		E			F			E			F	

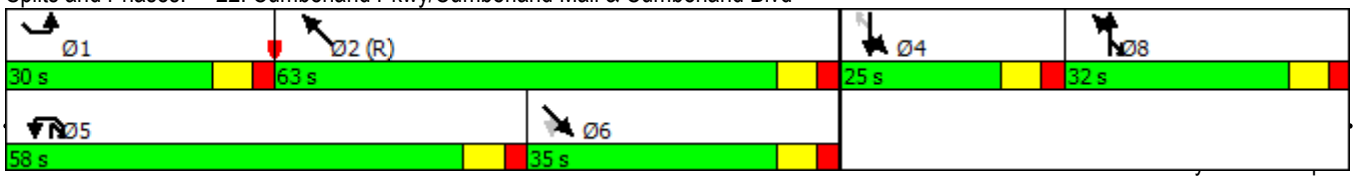
Intersection Summary			
HCM 2000 Control Delay	78.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

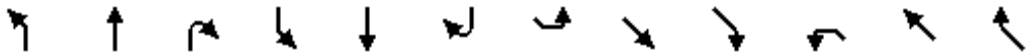
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT
Lane Configurations											
Traffic Volume (vph)	363	128	640	31	322	147	130	193	460	1175	555
Future Volume (vph)	363	128	640	31	322	147	130	193	460	1175	555
Lane Group Flow (vph)	290	297	727	31	339	155	169	272	590	1250	685
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	8	8	8 5	4	4		1	6		5	2
Permitted Phases						4			6		
Detector Phase	8	8	8 5	4	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	32.0	32.0		25.0	25.0	25.0	30.0	35.0	35.0	58.0	63.0
Total Split (%)	21.3%	21.3%		16.7%	16.7%	16.7%	20.0%	23.3%	23.3%	38.7%	42.0%
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	C-Max
v/c Ratio	0.99	0.99	0.38	0.19	0.82	0.45	0.61	0.42	1.05	1.05	0.51
Control Delay	111.2	109.6	2.0	62.8	81.4	8.6	69.8	56.2	77.0	87.7	37.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.2	109.6	2.0	62.8	81.4	8.6	69.8	56.2	77.0	87.7	37.8
Queue Length 50th (ft)	~313	~314	6	28	172	0	157	125	~353	~684	270
Queue Length 95th (ft)	#469	#431	32	63	#238	43	201	133	#401	#822	314
Internal Link Dist (ft)		1280			195			880			560
Turn Bay Length (ft)	255		245				220		320	440	
Base Capacity (vph)	293	301	1894	166	428	350	276	647	563	1190	1338
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.99	0.38	0.19	0.79	0.44	0.61	0.42	1.05	1.05	0.51

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 29 (19%), Referenced to phase 2:NWT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Cumberland Pkwy/Cumberland Mall & Cumberland Blvd





Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	363	128	640	31	322	147	130	193	460	1175	555	19
Future Volume (vph)	363	128	640	31	322	147	130	193	460	1175	555	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	0.95	0.88	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1715	1764	2842	1388	3574	1583	1805	3471	1615	3502	3578	
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1715	1764	2842	1388	3574	1583	1805	3471	1615	3502	3578	
Peak-hour factor, PHF	0.85	0.80	0.88	1.00	0.95	0.95	0.77	0.71	0.78	0.94	0.86	0.48
Adj. Flow (vph)	427	160	727	31	339	155	169	272	590	1250	645	40
RTOR Reduction (vph)	0	0	310	0	0	137	0	0	262	0	3	0
Lane Group Flow (vph)	290	297	417	31	339	18	169	272	328	1250	682	0
Heavy Vehicles (%)	0%	0%	0%	30%	1%	2%	0%	4%	0%	0%	0%	0%
Turn Type	Split	NA	pt+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	8	8	8 5	4	4		1	6		5	2	
Permitted Phases						4			6			
Actuated Green, G (s)	25.7	25.7	83.7	17.3	17.3	17.3	23.0	28.0	28.0	51.0	56.0	
Effective Green, g (s)	25.7	25.7	83.7	17.3	17.3	17.3	23.0	28.0	28.0	51.0	56.0	
Actuated g/C Ratio	0.17	0.17	0.56	0.12	0.12	0.12	0.15	0.19	0.19	0.34	0.37	
Clearance Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	293	302	1585	160	412	182	276	647	301	1190	1335	
v/s Ratio Prot	c0.17	0.17	0.15	0.02	c0.09		0.09	0.08		c0.36	0.19	
v/s Ratio Perm						0.01			c0.20			
v/c Ratio	0.99	0.98	0.26	0.19	0.82	0.10	0.61	0.42	1.09	1.05	0.51	
Uniform Delay, d1	62.0	61.9	17.2	60.0	64.9	59.4	59.3	53.8	61.0	49.5	36.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	49.2	46.9	0.1	0.6	12.5	0.2	9.8	2.0	78.1	40.4	1.4	
Delay (s)	111.2	108.9	17.3	60.6	77.3	59.6	69.1	55.8	139.1	89.9	37.8	
Level of Service	F	F	B	E	E	E	E	E	F	F	D	
Approach Delay (s)		58.7			71.1			105.7			71.4	
Approach LOS		E			E			F			E	

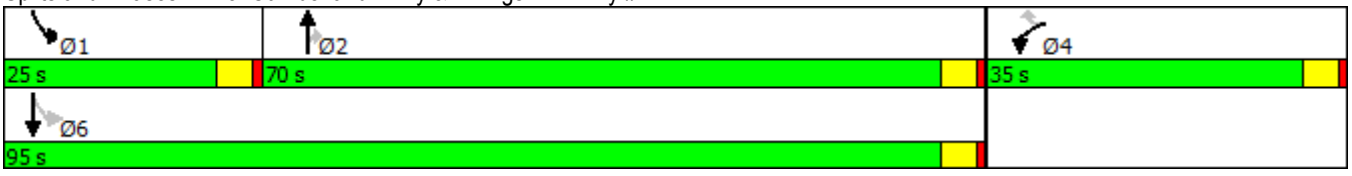
Intersection Summary			
HCM 2000 Control Delay	75.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	206	253	670	178	234	1589
Future Volume (vph)	206	253	670	178	234	1589
Lane Group Flow (vph)	224	275	728	193	254	1727
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases		4		2	6	
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	35.0	35.0	70.0	70.0	25.0	95.0
Total Split (%)	26.9%	26.9%	53.8%	53.8%	19.2%	73.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
v/c Ratio	0.60	0.50	0.44	0.23	0.50	0.74
Control Delay	38.4	7.8	15.2	2.8	8.9	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	7.8	15.2	2.8	8.9	11.1
Queue Length 50th (ft)	94	0	112	0	39	231
Queue Length 95th (ft)	230	68	214	35	95	454
Internal Link Dist (ft)	257		390			740
Turn Bay Length (ft)				400	250	
Base Capacity (vph)	745	826	2959	1355	695	3381
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.33	0.25	0.14	0.37	0.51

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 78.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 23: Cumberland Pkwy & Vinings ATL Dwy #1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	206	253	670	178	234	1589
Future Volume (vph)	206	253	670	178	234	1589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	3539	1583	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.27	1.00
Satd. Flow (perm)	1770	1583	3539	1583	511	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	224	275	728	193	254	1727
RTOR Reduction (vph)	0	216	0	102	0	0
Lane Group Flow (vph)	224	59	728	91	254	1727
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases		4		2	6	
Actuated Green, G (s)	16.6	16.6	36.8	36.8	52.2	52.2
Effective Green, g (s)	16.6	16.6	36.8	36.8	52.2	52.2
Actuated g/C Ratio	0.21	0.21	0.47	0.47	0.67	0.67
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	377	337	1673	748	519	2374
v/s Ratio Prot	c0.13		0.21		0.07	c0.49
v/s Ratio Perm		0.04		0.06	0.26	
v/c Ratio	0.59	0.17	0.44	0.12	0.49	0.73
Uniform Delay, d1	27.6	25.0	13.6	11.5	6.2	8.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.2	0.2	0.1	0.7	1.1
Delay (s)	30.1	25.2	13.8	11.5	6.9	9.4
Level of Service	C	C	B	B	A	A
Approach Delay (s)	27.4		13.3			9.0
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	77.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

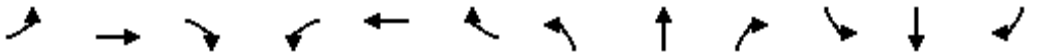
c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1366	470	482	1026	555	686
Future Volume (vph)	1366	470	482	1026	555	686
Lane Group Flow (vph)	1607	588	603	1153	603	722
Turn Type	NA	Perm	Prot	NA	Perm	Perm
Protected Phases	6		5	2		
Permitted Phases		6			8	8
Detector Phase	6	6	5	2	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	12.0	26.0	20.0	20.0
Total Split (s)	52.0	52.0	40.0	92.0	48.0	48.0
Total Split (%)	37.1%	37.1%	28.6%	65.7%	34.3%	34.3%
Yellow Time (s)	4.5	4.5	4.0	4.5	5.0	5.0
All-Red Time (s)	3.5	3.5	3.0	3.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	7.0	8.0	7.5	7.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
v/c Ratio	0.55	0.60	0.84	0.35	0.47	0.87
Control Delay	36.1	5.6	64.5	12.8	44.9	50.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	5.6	64.5	12.8	44.9	50.9
Queue Length 50th (ft)	286	0	273	173	164	290
Queue Length 95th (ft)	324	28	286	216	195	364
Internal Link Dist (ft)	560			660		
Turn Bay Length (ft)		275				
Base Capacity (vph)	2928	978	825	3297	1472	928
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.60	0.73	0.35	0.41	0.78

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 23 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 34: I-285 SB Entrance Ramp/I-285 SB Exit Ramp & Paces Ferry Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1366	470	482	1026	0	0	0	0	555	0	686
Future Volume (vph)	0	1366	470	482	1026	0	0	0	0	555	0	686
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Lane Util. Factor		0.81	1.00	0.97	0.91					0.94		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		7695	1615	3502	5187					5090		2842
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		7695	1615	3502	5187					5090		2842
Peak-hour factor, PHF	0.25	0.85	0.80	0.80	0.89	0.25	0.25	0.25	0.25	0.92	0.25	0.95
Adj. Flow (vph)	0	1607	588	602	1153	0	0	0	0	603	0	722
RTOR Reduction (vph)	0	0	364	0	0	0	0	0	0	0	0	111
Lane Group Flow (vph)	0	1607	224	603	1153	0	0	0	0	603	0	611
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm		Perm
Protected Phases		6		5	2							
Permitted Phases			6							8		8
Actuated Green, G (s)		53.3	53.3	28.7	89.0					35.5		35.5
Effective Green, g (s)		53.3	53.3	28.7	89.0					35.5		35.5
Actuated g/C Ratio		0.38	0.38	0.20	0.64					0.25		0.25
Clearance Time (s)		8.0	8.0	7.0	8.0					7.5		7.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		2929	614	717	3297					1290		720
v/s Ratio Prot		c0.21		c0.17	0.22							
v/s Ratio Perm			0.14							0.12		c0.21
v/c Ratio		0.55	0.36	0.84	0.35					0.47		0.85
Uniform Delay, d1		33.9	31.2	53.5	11.9					44.2		49.7
Progression Factor		1.00	1.00	1.00	1.00					1.00		1.00
Incremental Delay, d2		0.7	1.7	8.8	0.3					0.3		9.2
Delay (s)		34.7	32.8	62.3	12.2					44.5		58.9
Level of Service		C	C	E	B					D		E
Approach Delay (s)		34.2			29.4			0.0			52.3	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	37.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	186	13	0	74	14	0
Future Volume (Veh/h)	186	13	0	74	14	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	202	14	0	80	15	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			216		289	209
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			216		289	209
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	100
cM capacity (veh/h)			1354		702	831

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	216	80	15
Volume Left	0	0	15
Volume Right	14	0	0
cSH	1700	1354	702
Volume to Capacity	0.13	0.00	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	10.2
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	5	843	9	0	1794
Future Volume (Veh/h)	0	5	843	9	0	1794
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	916	10	0	1950
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						470
pX, platoon unblocked	0.65					
vC, conflicting volume	1896	463			926	
vC1, stage 1 conf vol	921					
vC2, stage 2 conf vol	975					
vCu, unblocked vol	1295	463			926	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	311	546			734	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	5	611	315	0	975	975
Volume Left	0	0	0	0	0	0
Volume Right	5	0	10	0	0	0
cSH	546	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.36	0.19	0.00	0.57	0.57
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	11.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	11.7	0.0		0.0		
Approach LOS	B					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		