ASPEN HILLS REDEVELOPMENT

Development of Regional Impact # 1353

COBB COUNTY, GA

TRAFFIC IMPACT STUDY

Prepared for:

Aspen Hills Redevelopment
3328 Peachtree Road, NE, Suite 300
Atlanta, Georgia 30326

Prepared by:

A&R Engineering Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067
Tel: (770) 690-9255 Fax: (770) 690-9210
www.areng.com

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May 18, 2007
A&R Project No: 07-017

EXECUTIVE SUMMARY

The purpose of this study is to determine the traffic impact that will result from the Aspen Hills Redevelopment proposed along South Cobb Drive (SR 280) to the southeast of the intersection of South Cobb Drive / Church Road / Kenwood Road / Oakdale Road, in Cobb County, Georgia. The proposed development will consist of 431,720 s.f of retail space. The site is currently occupied by the Aspen Hills Apartment complex and a gas station which will be demolished as part of the project. The traffic analysis evaluated the following scenarios: existing conditions, the year 2009 without additional traffic generated by the site, and the year 2009 with the traffic generated by the development.

From the existing condition analysis it was found that three intersections within the study area are not currently operating at the LOS standard of D. Analysis of the Base Year 2009 also revealed that three study intersections being analyzed will not meet the required LOS standard.

The Future 2009 conditions including the site-generated traffic were then evaluated using existing lane geometry. Four study network intersections will not meet the required LOS standard after the project is completed if no roadway improvements are implemented. Improvements were recommended to restore those intersections back the LOS standard. Additionally, recommendations to allow the site accesses to operate satisfactorily were identified. Details can be found in the site access analysis section of the report.

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1. PROJECT DESCRIPTION

The purpose of this study is to determine the traffic impact that will result from the Aspens Hills Redevelopment proposed along South Cobb Drive (SR 280) to the southeast of the intersection of South Cobb Drive / Church Road / Kenwood Road / Oakdale Road in Cobb County, Georgia. The proposed development will consist of 431,720 s.f of retail space. An existing gas station driveway that aligns across from Highland Parkway will serve as the primary access for the site. The gas station is proposed to be closed and demolished as part of the redevelopment. The site will also have right-in / right-out access along South Cobb Drive and three full access driveways along Church Road. The right in / right out access along South Cobb Drive currently serves the Aspen Hills Apartment Complex. The Apartment complex also has one access along Church Road. A location map for the site is shown in Figure 1.

1.1 Site Plan

A site plan for this project is shown in Figure 2. A larger size drawing and a digital copy of the site plan are also provided with this report.

1.2 Consistency with Adopted Comprehensive County Plan

The Aspen Hills Redevelopment DRI site is made up of four tracts. The main large tract is zoned RM-12 (residential multi-family) with two smaller tracts of TS (tourist services) and one tract of GC (General Commercial). The site will require rezoning to General Commercial to accommodate the proposed project.

1.3 Project Phasing

The project's impact will be evaluated in one phase, estimated for completion in the year 2009. This study will evaluate the traffic operations in the vicinity of the site for existing conditions year 2007, the year 2009 without additional traffic generated by the site, and the year 2009 with the additional traffic generated by the development.

LOCATION MAP FIGURE 1

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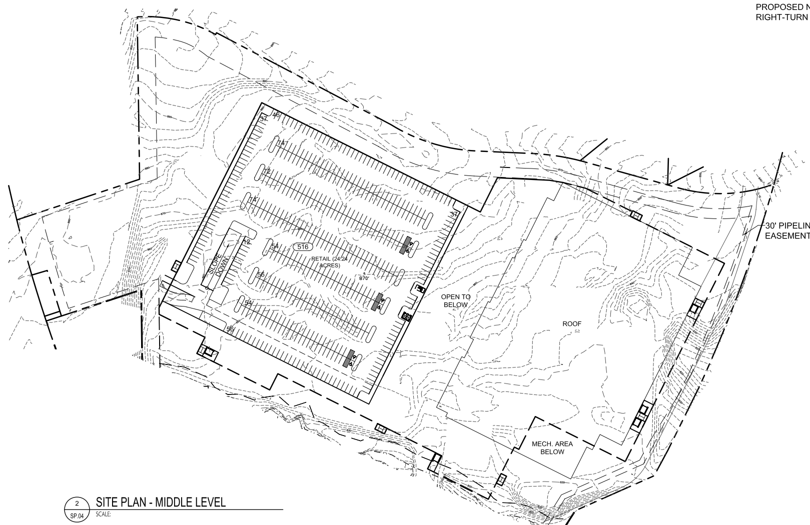
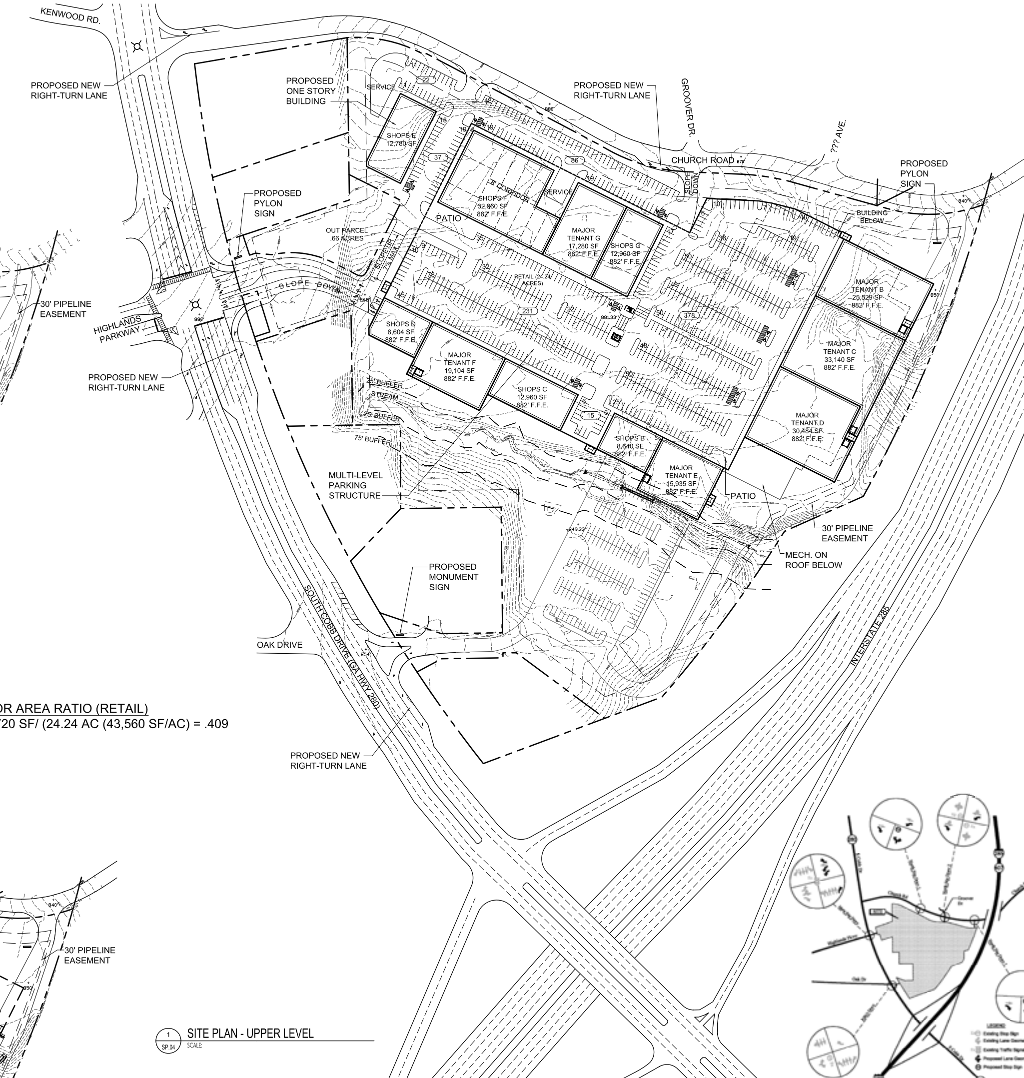
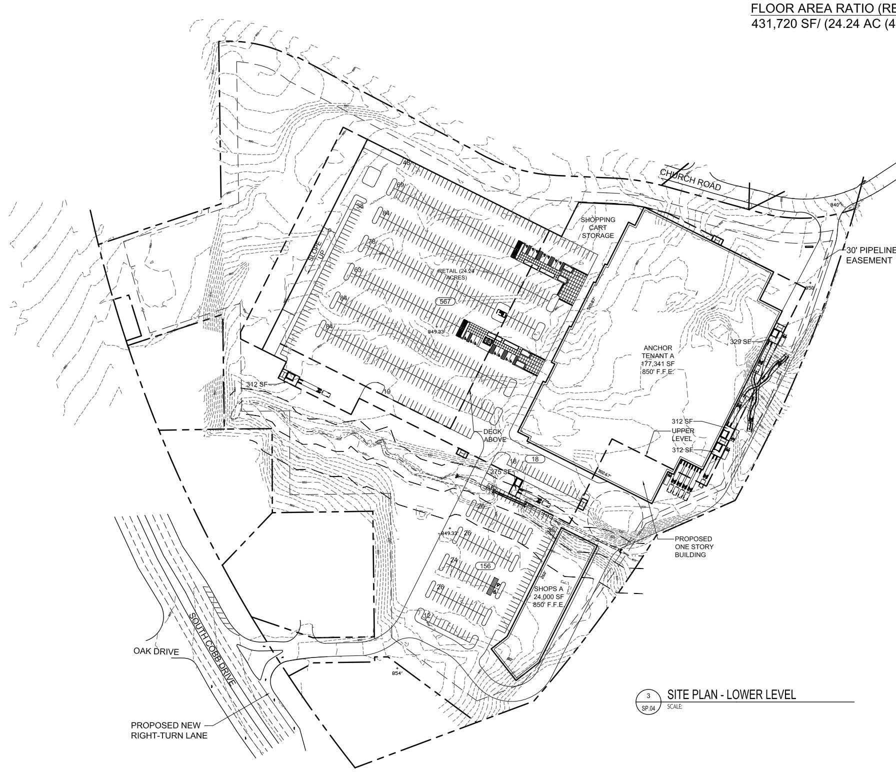


2 SP.04 SITE PLAN - MIDDLE LEVEL
SCALE:



1 SP.04 SITE PLAN - UPPER LEVEL
SCALE:

FLOOR AREA RATIO (RETAIL)
431,720 SF/ (24.24 AC (43,560 SF/AC) = .409



3 SP.04 SITE PLAN - LOWER LEVEL
SCALE:

0' 50' 100' 200'

FUTURE 2009 SITE ACCESS TRAFFIC CONTROL AND LANE GEOMETRY FIGURE
A&R Engineering Inc.

RETAIL PROJECT DATA

	GROSS LEASABLE AREA
LOWER LEVEL TENANT	
ANCHOR TENANT 'A'	177,341 LSF
SHOPS A	24,000 LSF
LOWER LEVEL TOTAL	201,341 LSF
UPPER LEVEL TENANTS	
MAJOR TENANT 'B'	25,529 LSF
MAJOR TENANT 'C'	33,140 LSF
MAJOR TENANT 'D'	30,484 LSF
MAJOR TENANT 'E'	15,935 LSF
MAJOR TENANT 'F'	19,104 LSF
MAJOR TENANT 'G'	17,280 LSF
SHOPS B	8,640 LSF
SHOPS C	10,800 LSF
SHOPS D	10,764 LSF
SHOPS E	12,780 LSF
SHOPS F	32,960 LSF
SHOPS G	12,960 LSF
UPPER LEVEL TOTAL	230,379 LSF
TENANT SUBTOTAL	431,720 LSF

PARKING

LEVEL	LOWER	MIDDLE	UPPER
OVERALL SPACES	741	516	780

	TOTAL SPACES / RATIO
LOWER LEVEL (INCLUDE 1/2 MID.)	999 / 4.96
UPPER LEVEL (INCLUDE 1/2 MID.)	1,038 / 4.50
PROJECT TOTAL	2,037 / 4.72

SITE LOCATION MAP

NOTE
TOPOGRAPHICAL INFO IS EXISTING
NEW TOPOGRAPHICAL TO BE DETERMINED

PHILLIPS PARTNERSHIP
Architecture • Interior Design • Planning
Phone 770.394.1616 Fax 770.394.1314

CONSULTANT

SEAL

REVISIONS
#	DATE	DESCRIPTION

TENANT

PROJECT

ASPEN HILLS

SOUTH COBB DRIVE
SMYRNA, GEORGIA

CLIENT
ASPEN HILLS REDEVELOPMENT LLC
3328 PEACHTREE ROAD, SUITE 300
ATLANTA, GEORGIA 30326
PHONE: 404-442-7888
FAX: 404-442-7999

PHILLIPS JOB NUMBER 0717701
ISSUE DATE 05/16/07
DRAWN BY/CHECKED BY CO/MLH/DEB
DRAWING TITLE
PRELIMINARY SITE PLAN
SHEET NUMBER
SP.04

9000 CENTRAL PARK WEST • SUITE 400 • ATLANTA, GEORGIA 30328

2. TRIP GENERATION

Trip generation estimates for the project were based on the rates and equations published in the 7th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. The ITE Trip Generation report contains traffic volume count data collected at similar facilities nationwide. The proposed development will consist of 431,720 s.f of retail space. Trip generation calculations for the project are shown in Table 1.

TABLE 1
TRIP GENERATION

Land Use	Total Size	P.M. Peak Hour			SAT Peak Hour			24-Hour 2-way
		Enter	Exit	Total	Enter	Exit	Total	
820 – Shopping Center	431,720 s.f.	789	855	1,644	1,165	1,075	2,240	17,572

2.1 Net Trip Ends

Due to the nature of the development Pass-by reductions were applied. Pass-by reductions have been taken for the PM and SAT peak hours based on the equations published in ITE Trip Generation Handbook. In addition to the pass-by reductions, as per the GRTA LOU, 2% transit reduction has also been applied since the area is served by Cobb Community Transit. The redevelopment includes the closure and demolition of the existing Aspen Hills Apartment Complex and a gas station. Accordingly, the volumes being generated by these facilities has been deducted from the trip generation estimates for the project to determine the net trips generated by the site. Trip Generation with the applied reductions is shown in the Table 2.

TABLE 2
TRIP GENERATION WITH REDUCTIONS

Land Use	Total Size	P.M. Peak Hour			SAT Peak Hour			24-Hour 2-way
		Enter	Exit	Total	Enter	Exit	Total	
820 - Shopping Center – 431,720 s.f.		**789**	**855**	**1,644**	**1,165**	**1,075**	**2,240**	**17,572**
*- Pass-By Reduction (25% / 28%)**		*-197*	*-214*	*-411*	*-326*	*-301*	*-627*	*-4,110***
- CCT Transit Reduction 2%		*-12*	*-13*	*-25*	*-17*	*-15*	*-32*	*-269*
Existing Apartment Trips		-114	-108	-222	-71	-71	-142	2,406***
Existing Gas Station Trips		-67	-114	-181	-93	-102	-195	2,202***
Total without reductions		789	855	1,644	1,165	1,075	2,240	17,572
Total with reductions		**399**	**406**	**805**	**658**	**586**	**1,244**	**8,585**

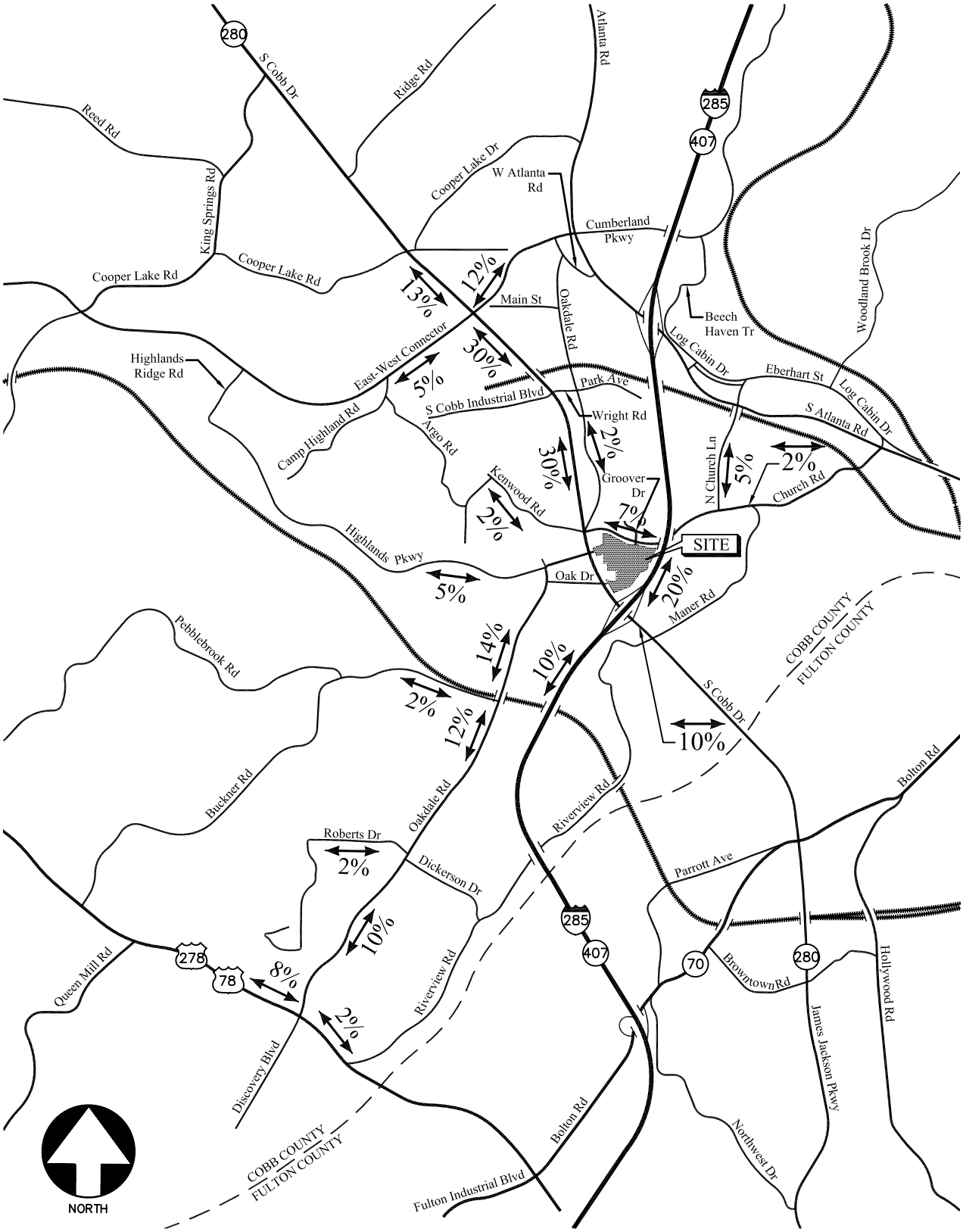
* (PM Pass-by % / SAT Pass-by %)

** The 24 hour pass by reduction has been calculated by assuming the total PM peak hour pass by trip reduction is 10% of the total daily pass-by reduction.

*** The 24-hour trips generated by these uses has been estimated by analyzing the ITE Trip generation rates for PM and 24-hours. The total PM volumes have been increased on this relationship to estimate the 24-hour volumes.

3. TRIP DISTRIBUTION & ASSIGNMENT

The trip distribution is the percentage of the traffic generated by the site that travels to and from the site on each segment of the surrounding roadway network. The trip distribution was based on the location of major roadways, highways and residential concentrations that will serve the development. The trip distribution is sh*own in Figure 3. The distribution was discussed and agreed upon in the methodology meeting. The site-generated volumes were then distributed to the surrounding roadway network based on the driver's destination, and the most easily accessible route.



TRIP DISTRIBUTION FIGURE 3

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4. STUDY NETWORK DETERMINATION

The study network was determined by evaluating the amount of traffic that the proposed development will add to each roadway segment in the area. According to GRTA requirements, a roadway segment carries a "significant" amount of traffic if the project contributes 7% or more trips to the two-way daily service volumes of the roadway at the appropriate level of service standard. Upon agreement with GRTA a level of service standard of "D" was used for determining the study area network.

The traffic generated by the proposed project was then assigned to the area roadways using the trip distribution to determine the site-generated traffic on each roadway segment. The boundaries of the study network extend to the most distant intersections where at least 7% of the service volumes on the segment are attributed to project traffic. The following intersections fell within the 7% rule and have been included in the traffic study:

1) South Cobb Drive / East – West Connector / Cumberland Parkway
2) South Cobb Drive / Church Road / Kenwood Road / Oakdale Road
3) South Cobb Drive / Highlands Parkway / Gas Station Driveway
4) South Cobb Drive / I-285 Northbound Ramps
5) South Cobb Drive / I-285 Southbound Ramps
6) Church Road / N Church Lane
7) Highlands Parkway / Oakdale Road
8) Oakdale Road / Veterans Memorial Parkway (US 278)
9) South Cobb Drive / Oak Drive / Tibarron Parkway
10) Church Road / Groover Drive / Tibarron Parkway

The study intersections are shown graphically in Figure 4. Other intersections within this corridor, such as unsignalized side streets, right-in / right-out driveways or private driveways were viewed as insignificant and have not been included in the study network. In addition to the above intersections, two site driveways along Church Road have been included in the analysis during the P.M. and SAT peak hours as agreed upon in the methodology meeting.

STUDY INTERSECTIONS FIGURE 4

A&R Engineering Inc.

5. PLANNED & PROGRAMMED IMPROVEMENTS

The following improvements have been identified in the Atlanta Regional Commission's Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP). These improvements are within the vicinity of the proposed development. Additional improvements for Cobb County have been identified, but they are not relevant to this project. Details of the planned programs can be found in the Appendix.

- CO-175A: SR 280 (South Cobb Drive) from SR 5 (Atlanta Road) in Cobb County to SR 70 (Bolton Road) in City of Atlanta
  - Includes widening of SR 280 (South Cobb Drive) from four lanes to six lanes.

- CO-328: Cumberland Parkway from SR 280 (South Cobb Parkway) to Atlanta Road
  - Includes widening of Cumberland Parkway from four lanes to six lanes.

- CO-AR-070B: I-285 West at Atlanta Road Bridge
  - Includes Construction of an interchange at I-285 West and East West Connector.

6. EXISTING CONDITIONS

An inventory was performed of the roadways in the area surrounding the site. The following is a brief description of each of these facilities.

6.1 Description of Transportation Facilities in Study Network

I-285

I-285 is an eight lane (four lanes in each direction) north-south interstate facility to the east of the proposed development.

SR 280 (South Cobb Drive)

SR 280 is a north-south six-lane undivided roadway with a posted speed limit of 45 mph in the vicinity of the site.

US 278 (US 78)

US 278 (US 78) is an east-west four-lane undivided roadway with a posted speed limit of 45 mph.

Cumberland Parkway

Cumberland Parkway is a four-lane undivided roadway with a posted speed limit of 45 mph.

Church Road

Church Road is an east-west two-lane roadway with a speed limit of 35 mph in the vicinity of the site. It runs between Atlanta Road in the east and South Cobb Drive in the west.

Oakdale Road

Oakdale Road is a north-south two-lane undivided roadway with a speed limit of 35 mph.

Kenwood Road

Kenwood Road is an east-west two-lane roadway with a posted speed limit of 25 mph. It runs from South Cobb Drive in the east and terminates into a dead end approximately 100 feet beyond Crowe Drive in the west.

Highlands Parkway

Highlands Parkway is a four-lane divided roadway with a speed limit of 45 mph. It extends between East-West Connector and South Cobb Drive.

Church Lane

Church Lane is a north-south two-lane roadway with a speed limit of 35 mph. It runs between Eberhart Street in the north and Church Road in the south.

Oak Drive

Oak Drive is an east-west two-lane roadway with a speed limit of 25 mph. It runs between South Cobb Drive in the east and Oakdale Road in the west.

Buckner Road

Buckner Road is a two-lane roadway. It runs between US 78 (US 278) and Oakdale Road.

Roberts Drive

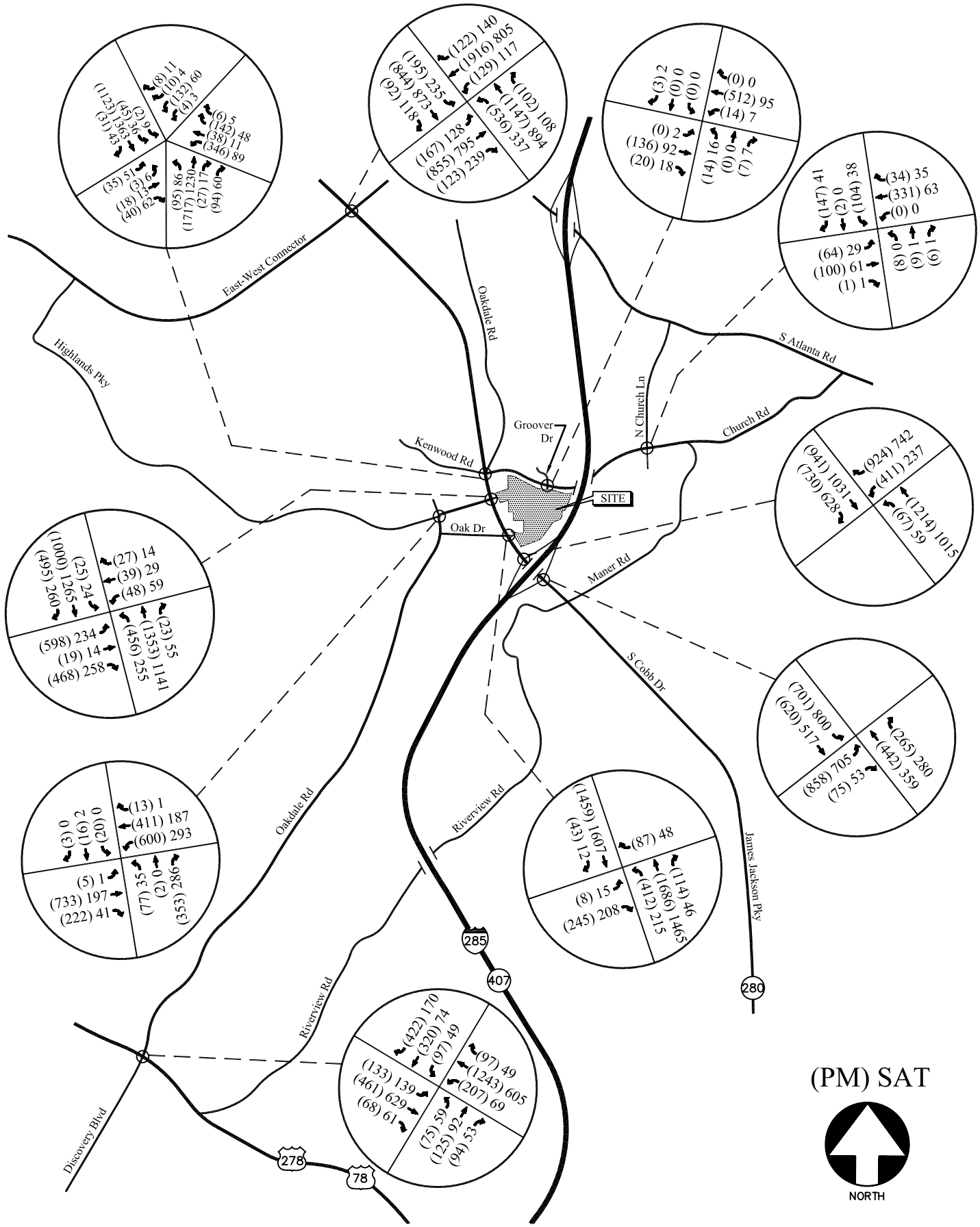
Roberts Drive is a two-lane roadway. It runs between Oakdale Road in the east and Brookside Drive in the west.

6.2 Analysis Summary

Existing traffic counts were collected at the intersections listed in Section 4 - Study Area Network. In addition to traffic counts, intersection geometry data was also obtained. Turning movement counts were collected during the agreed upon hours of 4:00 PM – 6:00 PM on weekdays and 12:00 PM – 2:00 PM on Saturday. The four consecutive 15-minute interval volumes that summed to produce the highest volume at each intersection during each two-hour period were then determined. These volumes make up the P.M. and Saturday peak hour traffic volumes for the intersections counted. The existing traffic volumes are shown in Figure 5 and the existing intersections traffic control and lane geometry for the study area network is shown in Figure 6.

The existing signal phasing and timing information for the PM and Saturday peak hours was obtained from the City of Smyrna and Cobb County for five signalized intersections along South Cobb Drive (I-285 NB Ramps, I-285 SB Ramps, Highland Parkway, Church Road / Kenwood Road, Cumberland Parkway / E-W Connector). This information was used to analyze the traffic operations at these five signalized intersections.

The site-generated volumes shown in Table 2 were distributed to the surrounding roadway network in accordance with the trip distribution. The site-generated volumes for the study intersections are shown in Figure 7. Figure 7 includes all the traffic that will be generated by the proposed development. It does not show the net effect of deducting the existing traffic that is currently being generated by the apartment complex and adjacent gas station both of which will be closed and demolished as part of the redevelopment. Existing traffic operations were analyzed at all the existing intersections in accordance with the HCM methodology using Synchro software. The results of the analysis are shown in Table 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES FIGURE 5

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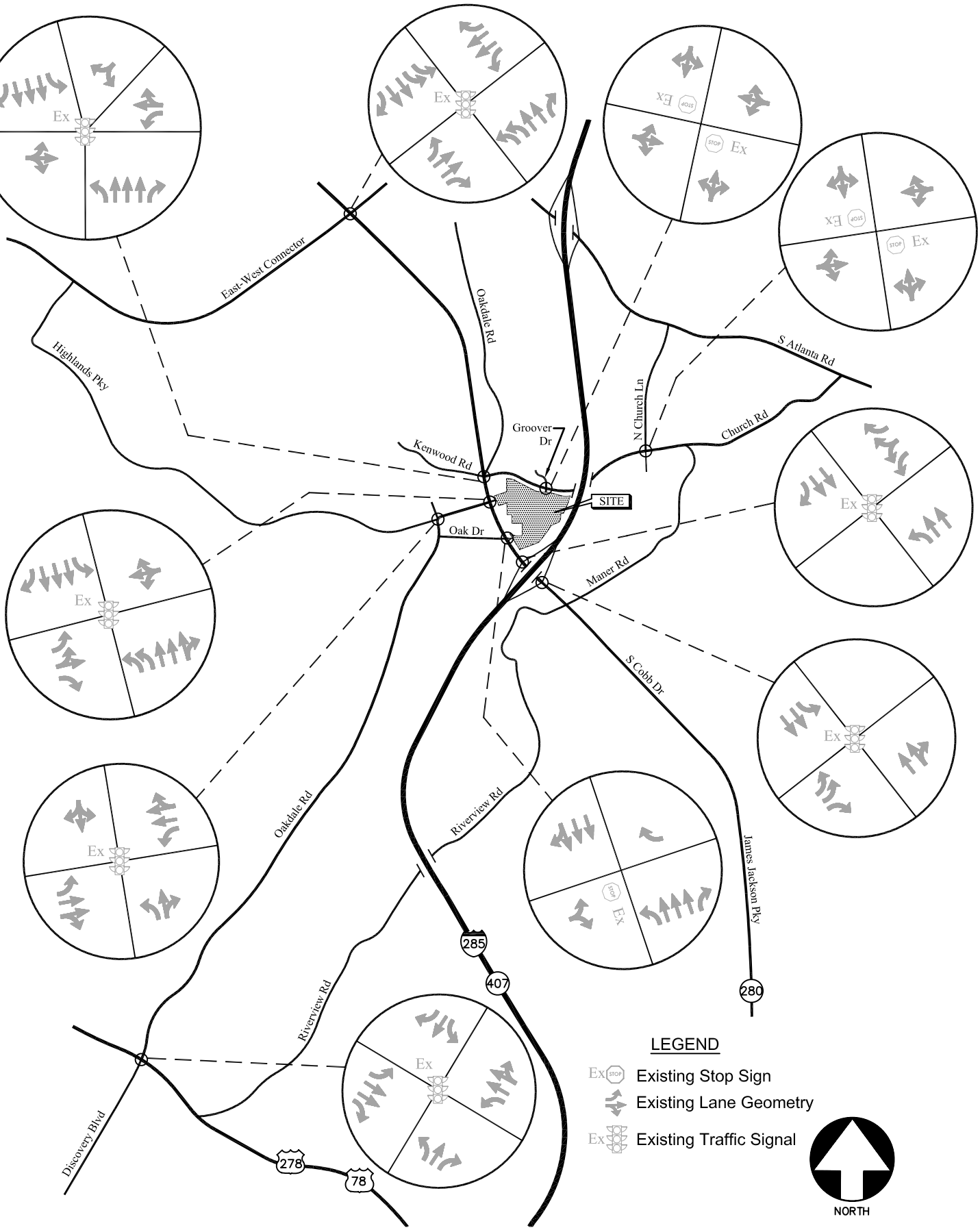


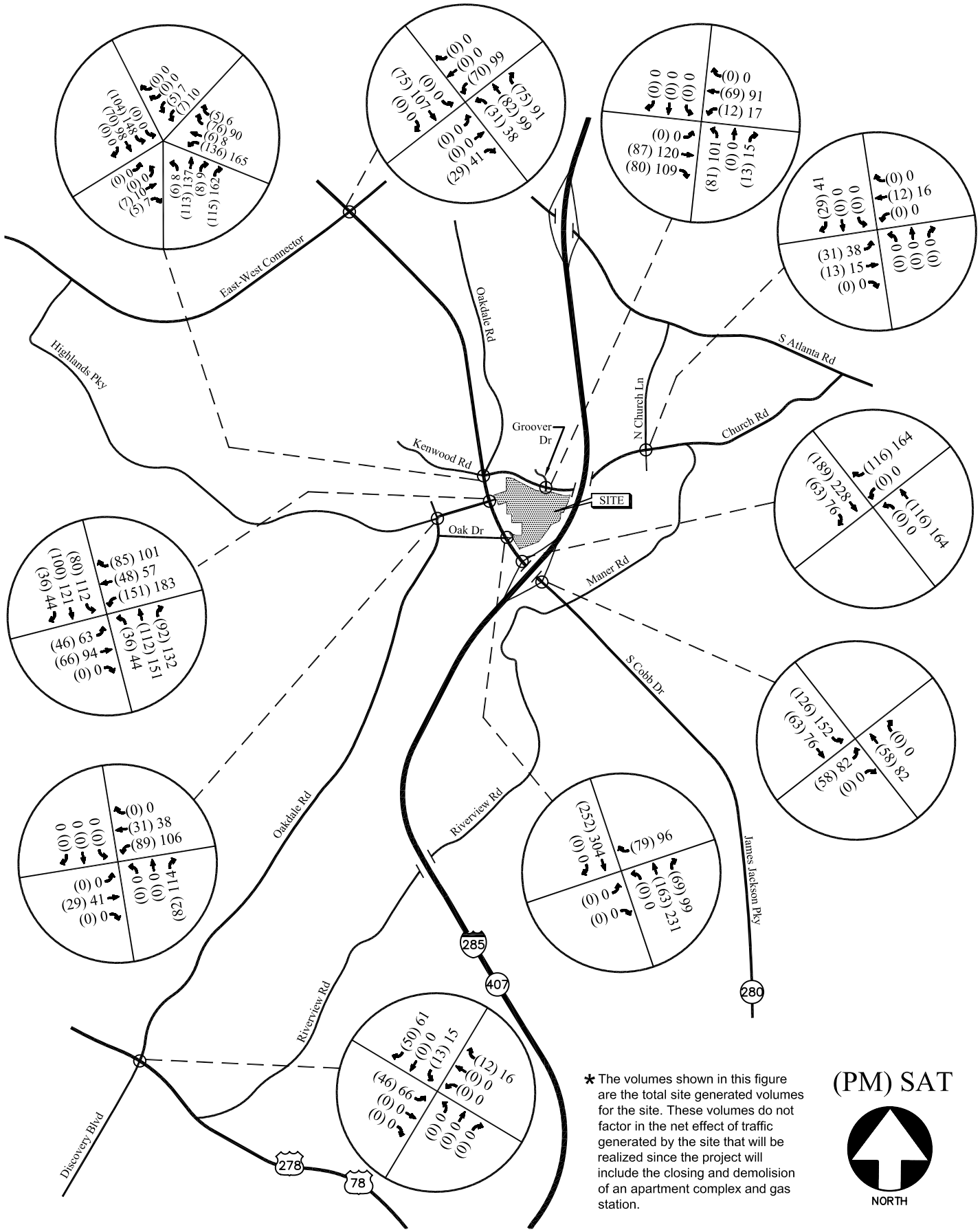
EXISTING TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 6

A&R Engineering Inc.

TABLE 3 EXISTING INTERSECTION OPERATIONS						
Intersection	PM/SAT LOS Standard	Traffic Control	P.M. Peak Hour		SAT Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*
South Cobb Dr / Cumberland Pkwy	E/E	Signalized	F (134.4)	1.25	E (66.4)	0.81
South Cobb Dr / Church Rd / Oakdale Rd / Kenwood Rd	D/D	Signalized	D (44.7)	0.86	B (15.1)	0.56
South Cobb Dr / Highland Pkwy / Gas Station Drwy	D/D	Signalized	D (41.2)	0.78	C (23.9)	0.58
South Cobb Dr / I-285 Southbound Ramps	E/E	Signalized	E (69.7)	0.69	E (72.9)	0.57
South Cobb Dr / I-285 Northbound Ramps	E/E	Signalized	E (65.1)	1.04	F (88.3)	1.24
Highlands Pkwy / Oakdale Rd / Integrity Heights Condos Private Drwy	D/D	Signalized	C (25.9)	0.86	A (8.8)	0.29
US 278 (US 78) / Oakdale Rd / Discovery Boulevard	D/D	Signalized	C (28.4)	0.75	B (16.1)	0.38
Church Rd / North Church Ln / Valley Crest Co Private Drwy		Stop Controlled on North Church				
-Eastbound Left	D/D	Lane / Valley	A (3.7)	-	A (3.0)	-
-Northbound Approach	D/D	Crest Co Private	C (17.5)	-	A (9.7)	-
-Southbound Approach	D/D	Driveway	C (23.4)	-	B (10.2)	-
Church Rd / Groover Dr / Tibarron Pkwy						
-Eastbound Left	D/D	Stop Controlled	A (0.0)	-	A (0.2)	-
-Westbound Left	D/D	on Groover Dr /	A (0.4)	-	A (0.5)	-
-Northbound Approach	D/D	Tibarron Pkwy	C (15.4)	-	B (10.1)	-
-Southbound Approach	D/D		B (11.7)	-	A (8.9)	-

*v/c ratio is not calculated for unsignalized intersections.

As shown in Table 3, three of the study intersections are not operating at the required LOS standard.



* The volumes shown in this figure are the total site generated volumes for the site. These volumes do not factor in the net effect of traffic generated by the site that will be realized since the project will include the closing and demolision of an apartment complex and gas station.

(PM) SAT

NORTH

SITE-GENERATED WEEKDAY PEAK-HOUR VOLUMES

FIGURE 7

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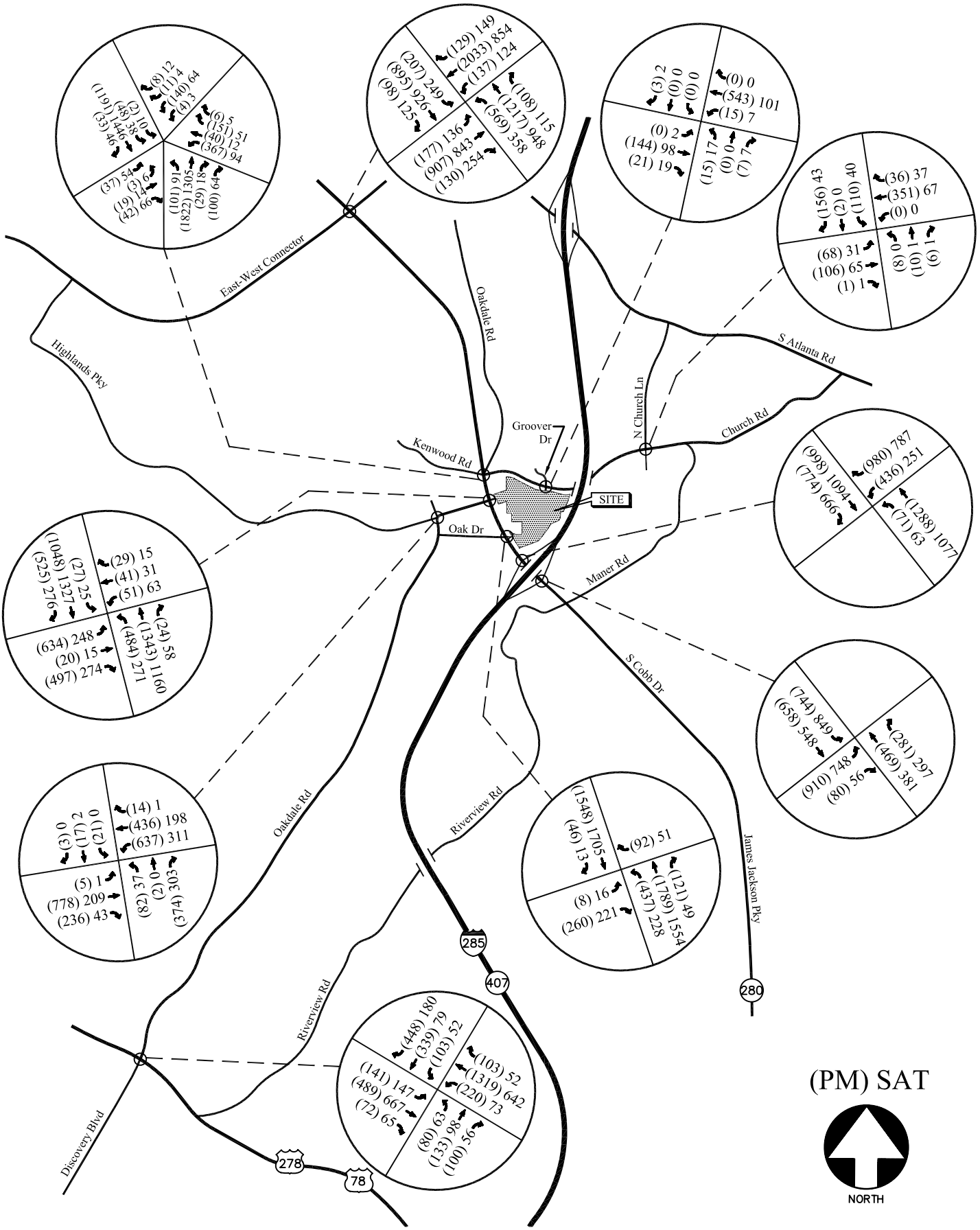
7. FUTURE YEAR BACKGROUND TRAFFIC

In order to evaluate future traffic operations in this area a projection was made of future base year traffic volumes. The Georgia Department of Transportation collected ADT's in the vicinity of the site over the last several years. Using this information, an annual growth factor of 2.7% was calculated. It was agreed upon in the methodology meeting and GRTA letter of understanding to use a growth factor of 3%. This growth factor was applied to the existing traffic volumes on the roadways to estimate the future year 2009 traffic volumes prior to the addition of the site-generated volumes. The future year (base) traffic volumes for 2009 at all the study intersections are shown in Figure 8. The existing signal phasing and timing information obtained from the City of Smyrna and Cobb County for five signalized intersections along South Cobb Drive (I-285 NB Ramps, I-285 SB Ramps, Highland Parkway, Church Road / Kenwood Road, Cumberland Parkway / E-W Connector) was also used to analyze the base traffic operations.

A traffic operation analyses for the following base scenarios was performed:

- Base Year 2009 traffic with existing lane geometry.
- Base Year 2009 traffic with additional recommended improvements to bring all intersections to LOS standard of D.

Results of the analyses for the above scenarios are shown in Tables 4 and 5. Recommendations to bring the intersections back to the LOS standard are discussed after Table 4.



BASE 2009 WEEKDAY PEAK HOUR VOLUMES FIGURE 8

A&R Engineering Inc.

TABLE 4 BASE INTERSECTION OPERATIONS						
Intersection	PM/SAT LOS Standard	Traffic Control	P.M. Peak Hour		SAT Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*
South Cobb Dr / Cumberland Pkwy	E/E	Signalized	F (158.5)	1.33	E (78.1)	0.85
South Cobb Dr / Church Rd / Oakdale Rd / Kenwood Rd	D/D	Signalized	D (48.3)	0.91	B (16.0)	0.64
South Cobb Dr / Highland Pkwy / Gas Station Drwy	D/D	Signalized	D (43.8)	0.83	C (24.7)	0.61
South Cobb Dr / I-285 Southbound Ramps	E/E	Signalized	F (86.4)	0.74	F (95.4)	0.62
South Cobb Dr / I-285 Northbound Ramps	E/E	Signalized	E (79.5)	1.12	F (111.3)	1.35
Highlands Pkwy / Oakdale Rd / Integrity Heights Condos Private Drwy	D/D	Signalized	C (30.7)	0.90	A (8.9)	0.31
US 278 (US 78) / Oakdale Rd / Discovery Boulevard	D/D	Signalized	C (31.5)	0.81	B (16.7)	0.43
Church Rd / North Church Ln / Valley Crest Co Private Drwy -Eastbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D	Stop Controlled on North Church Lane / Valley Crest Co Private Driveway	 A (3.7) C (18.9) D (28.0)	 - - -	 A (2.5) A (9.9) B (10.6)	 - - -
Church Rd / Groover Dr / Tibarron Pkwy -Eastbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D	Stop Controlled on Groover Dr / Tibarron Pkwy	 A (0.0) C (16.3) B (12.0)	 - - -	 A (0.2) B (10.2) A (8.9)	 - - -

*v/c ratio is not calculated for unsignalized intersections.

Analysis of the future year (Base 2009) traffic volumes indicates that three of the study intersections will not operate at the LOS standard. The following improvements were identified for those intersections that did not comply with the LOS standard.

- South Cobb Drive / Cumberland Parkway
  - Cobb County DOT is proposing to add additional eastbound and westbound through lanes on Cumberland Parkway creating three through lanes in each direction. This improvement is a planned program projected for completion in 2008. After this improvement is completed, the intersection will continue to operate at LOS F during the PM peak hour. Cobb County is planning to grade separate this intersection in the future.
  - It is also recommended to optimize the intersection signal timing to help improve the overall delay at the intersection.

- South Cobb Drive / I-285 Southbound Ramps
    - Optimize intersection timing splits and offsets. If the signal timing splits and offsets are optimized, the intersection will operate at acceptable LOS without requiring any lane geometry improvements.

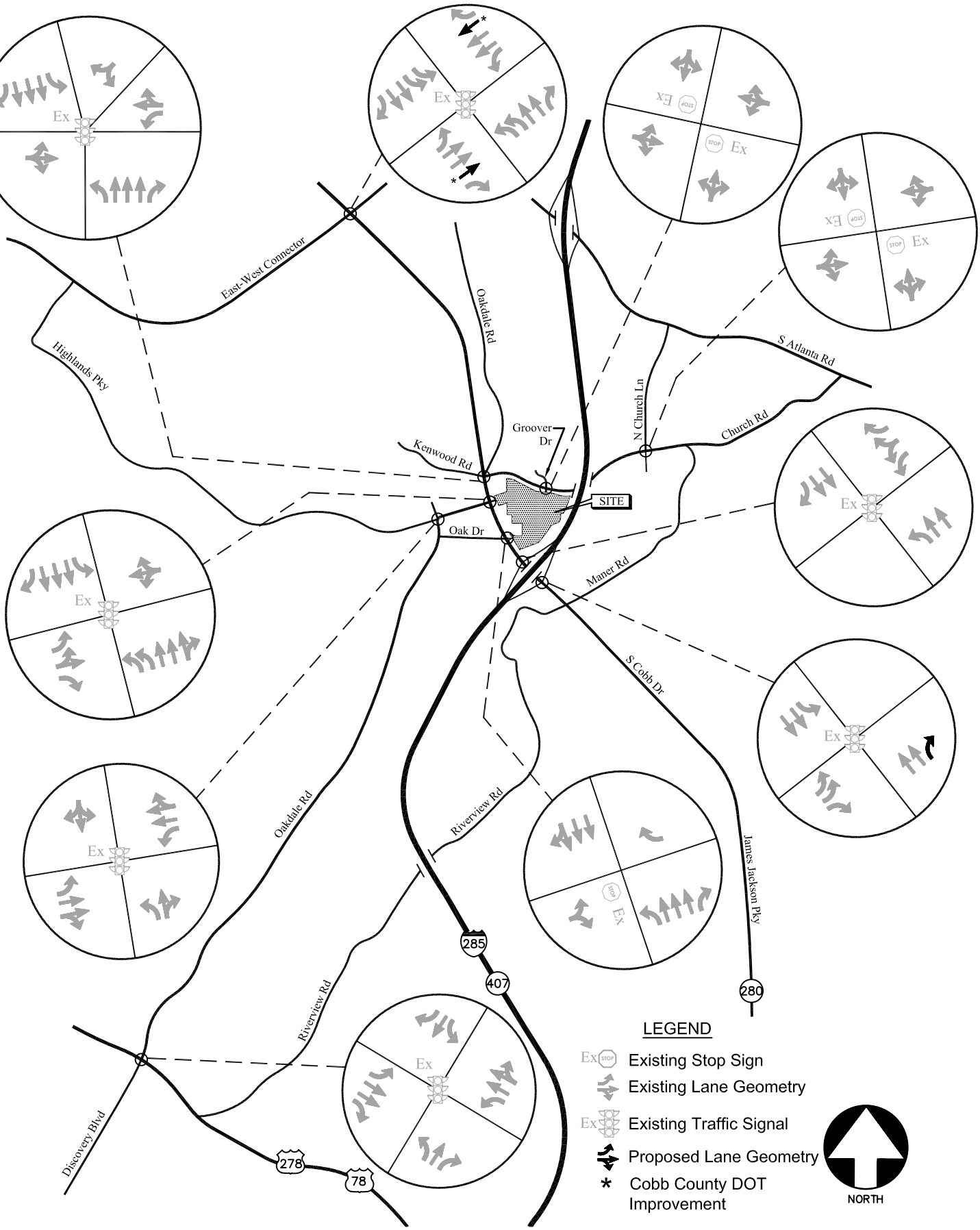
- South Cobb Drive / I-285 Northbound Ramps
    - Add a dedicated right turn lane on South Cobb Drive as per Georgia DOT standards.
    - It is also recommended to optimize the intersection signal timing splits and offsets to help the overall delay at the intersection.

The LOS at the above intersections in the year 2009 with just background traffic after the above improvements are implemented is shown in Table 5. The recommended base intersections traffic control and lane geometry are shown in Figure 9.

TABLE 5

BASE INTERSECTION OPERATIONS – WITH IMPROVEMENTS

Intersection	PM/SAT LOS Standard	Traffic Control	P.M. Peak Hour		SAT Peak Hour	
			LOS (Delay)	v/c	LOS (Delay)	v/c
South Cobb Dr / Cumberland Pkwy	E/E	Signalized	F (97.0)	1.07	D (46.4)	0.78
South Cobb Dr / I-285 Southbound Ramps	E/E	Signalized	D (37.7)	0.78	C (21.8)	0.66
South Cobb Dr / I-285 Northbound Ramps	E/E	Signalized	D (49.1)	0.91	D (49.2)	0.89



BASE 2009 TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 9

A&R Engineering Inc.

8. FUTURE YEAR TOTAL TRAFFIC

The traffic volumes that will be generated by the proposed development were added to the future base year 2009 traffic volumes in order to determine the traffic volumes that will be on the roadway network after completion of the project. The existing trips that are being generated by the existing apartment complex and gas station were deducted from the future traffic volumes since both will be closed and demolished as a part of redevelopment. The future traffic volumes for the year 2009 including the site-generated volumes and deductions for the study intersections are shown in Figure 10.

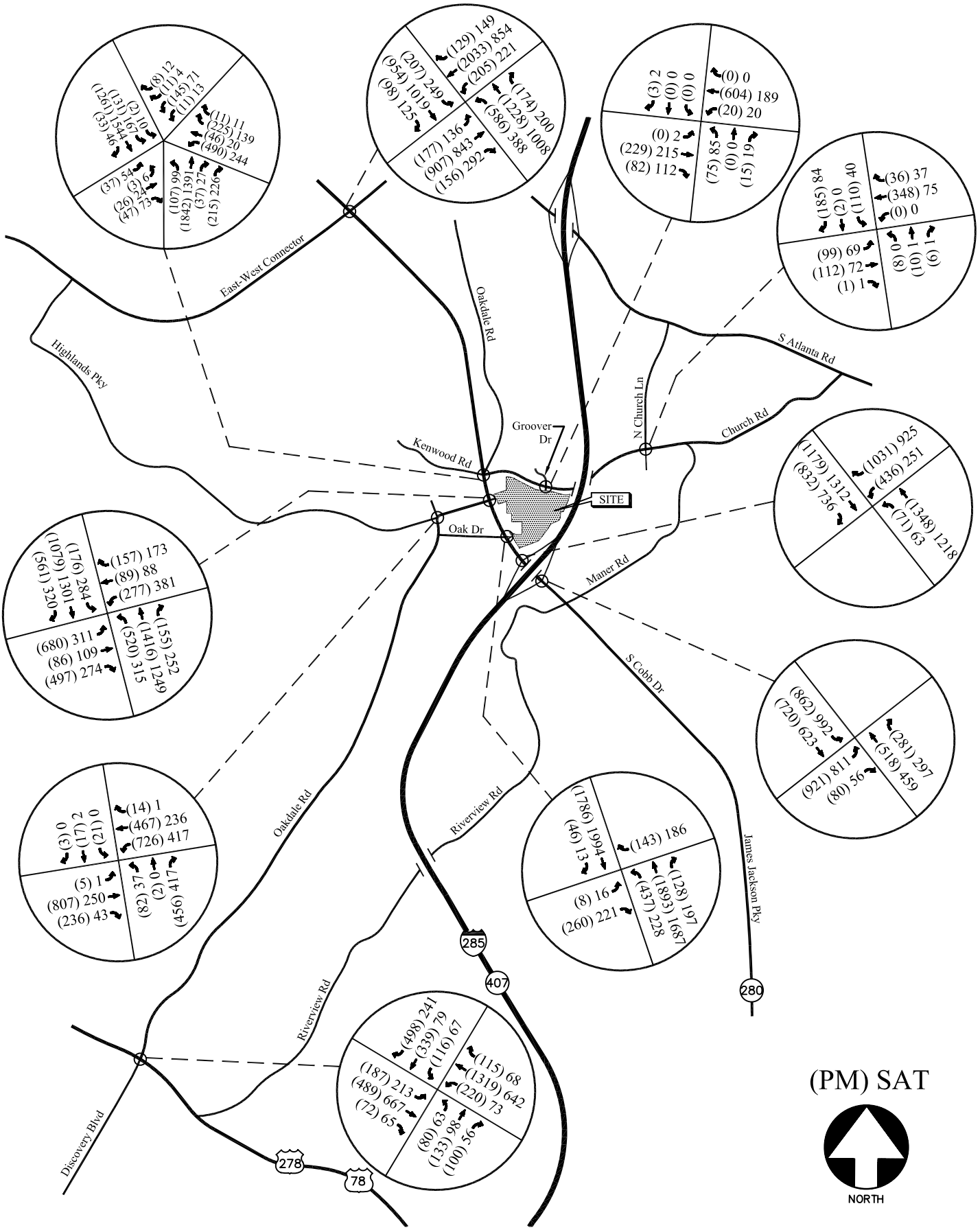
9. FACILITY NEEDS ANALYSIS

9.1 Intersection Analysis

The future year total traffic volumes were used to analyze the study network intersections. Traffic operations analyses for the following scenarios were performed:

- Future Year 2009 Traffic Volumes with site generated traffic and existing lane geometry.
- Future Year 2009 Traffic Volumes with site generated traffic and the recommended improvements to bring all intersections to LOS standard.

The results of the analysis for the above scenarios are shown in Tables 6 and 7. Recommendations to bring the intersections to the LOS standard are discussed after each appropriate section.



FUTURE 2009 WEEKDAY PEAK HOUR VOLUMES FIGURE 10

A&R Engineering Inc.

TABLE 6 FUTURE INTERSECTION OPERATIONS						
Intersection	PM/SAT LOS Standard	Traffic Control	P.M. Peak Hour		SAT Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*
South Cobb Dr / Cumberland Pkwy	E/E	Signalized	F (164.5)	1.30	E (56.1)	0.91
South Cobb Dr / Church Rd / Oakdale Rd / Kenwood Rd	D/D	Signalized	D (42.8)	1.18	C (26.3)	1.02
South Cobb Dr / Highland Pkwy / Main Site Driveway	D/D	Signalized	F (128.6)	1.22	F (122.6)	1.32
South Cobb Dr / I-285 Southbound Ramps	E/E	Signalized	C (25.8)	0.84	C (21.3)	0.84
South Cobb Dr / I-285 Northbound Ramps	E/E	Signalized	F (91.6)	1.09	F (89.6)	1.14
Highlands Pkwy / Oakdale Rd / Integrity Heights Condos Private Drwy	D/D	Signalized	D (36.8)	0.95	B (11.3)	0.47
US 278 (US 78) / Oakdale Rd / Discovery Boulevard	D/D	Signalized	C (34.9)	0.90	B (18.0)	0.48
Church Rd / North Church Ln / Valley Crest Co Private Drwy -Eastbound Left -Northbound Approach -Southbound Approach	D/D D/D D/D	Stop Controlled on North Church Lane / Valley Crest Co Private Driveway	A (4.5) C (22.9) E (38.6)	- - -	A (4.5) B (10.4) B (11.2)	- - -

*v/c ratio is not calculated for unsignalized intersections.

Analysis of the future year 2009 traffic volumes indicates that six of the study intersections will not operate within the LOS standard. The following lists the improvements needed to restore that intersections back to the LOS standard for the future year 2009 traffic:

- South Cobb Drive / Cumberland Parkway
  - Cobb County DOT is proposing to add additional eastbound and westbound through lanes on Cumberland Parkway creating three through lanes in each direction. This improvement is a planned program projected for completion in 2008. After this improvement is completed, the intersection will continue to operate at LOS F during the PM peak hour. Cobb County is planning to grade separate this intersection in the future.
  - It is also recommended to optimize the intersection signal timing to help improve the overall delay at the intersection.

- South Cobb Drive / Highland Parkway / Main Site Driveway
  - Optimize intersection signal timing splits and offsets.
  - Add a dedicated northbound right turn lane on South Cobb Drive as per

Georgia DOT standards.

- Provide westbound dual left turn lanes, a dedicated through lane and a dedicated westbound right turn lane on the Main Site Driveway.
- Change the existing southbound right turn phase on South Cobb Drive from permissive to permissive + overlap.

- South Cobb Drive / I-285 Northbound Ramps
  - Add a dedicated right turn lane on South Cobb Drive as per Georgia DOT standards.
  - It is also recommended to optimize the intersection signal timing splits and offsets to help the overall delay at the intersection.

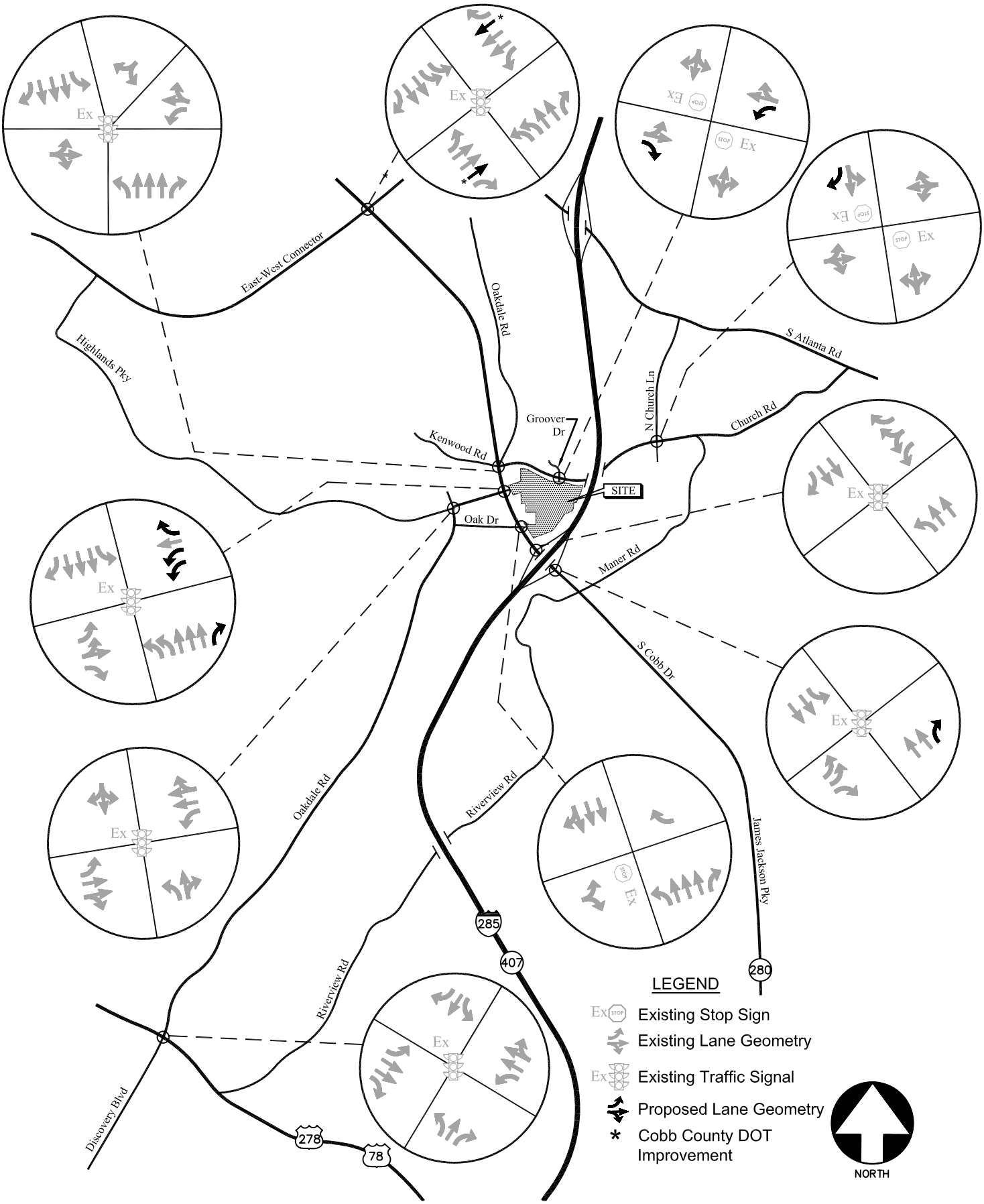
- Church Road / North Church Lane / Valley Crest Co Private Driveway
  - Add a dedicated southbound right turn lane on North Church Lane.

The LOS for the above intersections in the year 2009 with the addition of site-generated traffic after the implementation of above recommended improvement is shown in Table 7.

TABLE 7
FUTURE INTERSECTION OPERATIONS WITH IMPROVEMENTS

Intersection	PM/SAT LOS Standard	Traffic Control	P.M. Peak Hour		SAT Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
South Cobb Dr (SR 280) / Cumberland Pkwy	E/E	Signalized	F (98.7)	1.10	D (51.4)	0.81
South Cobb Dr (SR 280) / Highland Pkwy / Gas Station Drwy	D/D	Signalized	D (49.4)	0.85	D (46.6)	0.84
South Cobb Dr (SR 280) / I-285 Northbound Ramps	E/E	Signalized	E (61.8)	1.00	E (68.1)	1.03
Church Rd / North Church Ln / Valley Crest Co Private Drwy -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on North Church Lane / Valley Crest Co Private Driveway	 A (4.5) A (0.0) C (20.7) C (18.8)	 - - - -	 A(4.5) A (0.0) B (10.4) B (10.5)	 - - - -

The future intersection traffic control and lane geometry for the study area network needed to bring all intersections to the LOS standard is shown in Figure 11.



FUTURE 2009 TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 11

A&R Engineering Inc.

9.2 Site Access Analysis

The site proposes to have one full access (Main Site Driveway) and one right in right out driveways along South Cobb Drive and three full access site driveways along Church Road. The future traffic volumes at the site driveways are shown in Figure 12. The recommended traffic control and lane geometry at these driveways are presented in the following sections.

The site access analysis was performed for the Future Year 2009 traffic volumes with recommended lane geometry. Results of the analysis are shown in Table 8. Traffic control and lane geometry adopted to operate the intersections at the LOS standard are discussed in the following pages.

TABLE 8
FUTURE SITE DRIVEWAY OPERATIONS

Intersection	PM/SAT LOS Standard	Traffic Control	P.M. Peak Hour		SAT Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*
South Cobb Dr / Highland Pkwy / Main Site Drwy	D/D	Signalized	D (49.4)	0.85	D (46.6)	0.84
Church Rd / North Site Drwy 1		Stop Controlled				
-Westbound Left	D/D	on North Site	A (8.2)	-	A (8.3)	-
-Northbound Approach	D/D	Drwy 1	D (33.6)	-	C (17.3)	-
Church Rd / Groover Dr / North Site Drwy 2						
-Eastbound Left	D/D	Stop Controlled	A (0.0)	-	A (0.1)	-
-Westbound Left	D/D	on Groover Rd /	A (8.3)	-	A (8.2)	-
-Northbound Approach	D/D	North Site Drwy 2	D (34.3)	-	C (15.9)	-
-Southbound Approach	D/D		B (12.7)	-	A (9.5)	-
Church Rd / North Site Drwy 3		Stop Controlled				
-Westbound Left	D/D	on North Site	A (0.6)	-	A (1.4)	-
-Northbound Approach	D/D	Drwy 3	C (17.5)	-	B (11.2)	-

*v/c ratio is not calculated for unsignalized intersections.

The following lists the recommended lane geometry for the site driveways.

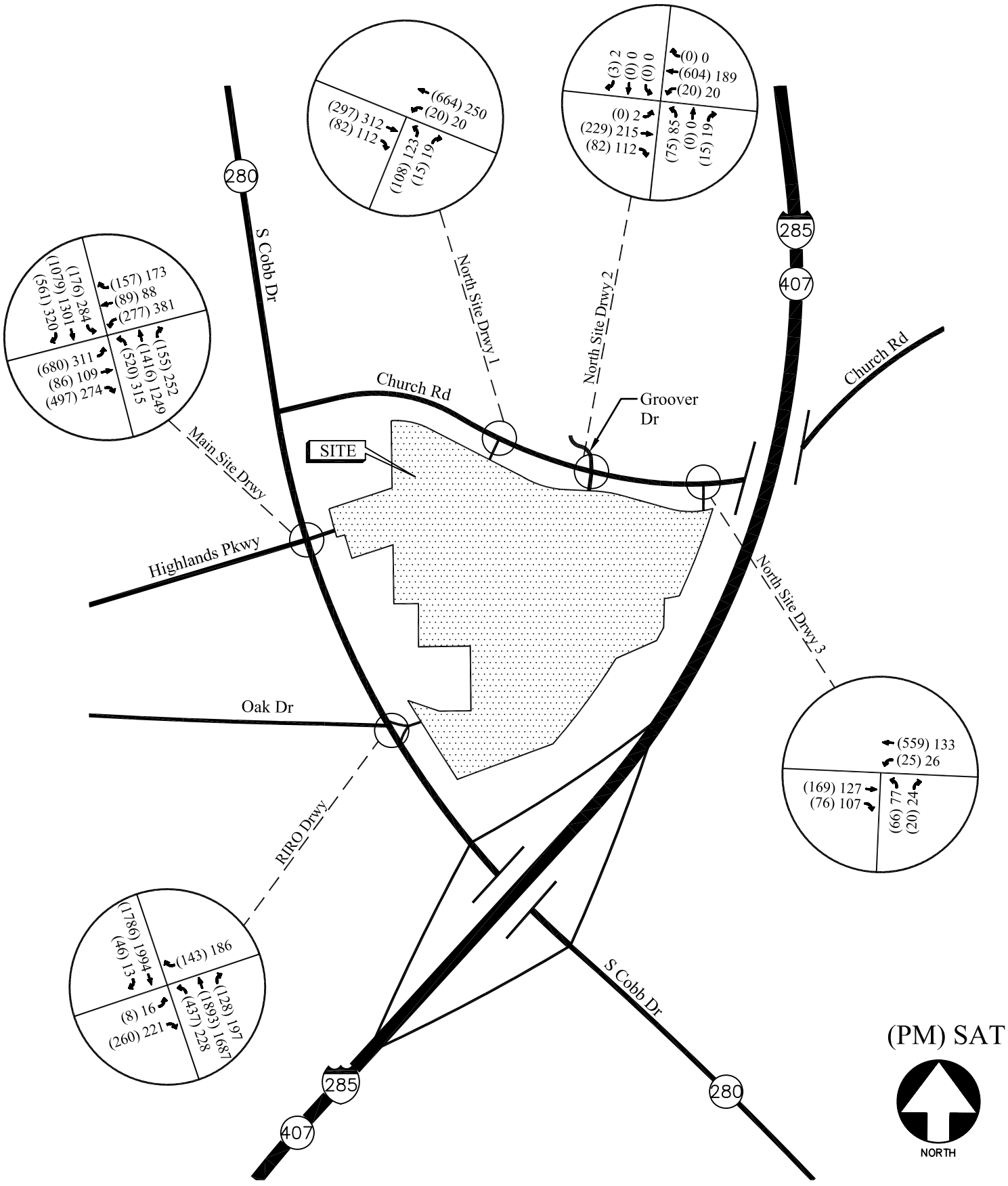
- South Cobb Drive / Highland Parkway / Main Site Driveway
  - Optimize intersection signal timing splits and offsets.
  - Add a dedicated northbound right turn lane on South Cobb Drive as per Georgia DOT standards.
  - Provide westbound dual left turn lanes, a dedicated through lane and a dedicated westbound right turn lane on the Main Site Driveway.
  - Change the existing southbound right turn phase on South Cobb Drive from permissive to permissive + overlap.

- Church Road / North Site Driveway 1
    - It is recommended that the intersection have a stop controlled side street (North Site Driveway 1), with Church Road remaining free flow.
    - Add a dedicated eastbound right turn lane and a dedicated westbound left turn lane on Church Road for traffic entering the proposed development.
    - Provide a shared left / right turn lane on the northbound approach for exiting traffic.

- Church Road / Groover Drive / North Site Driveway 2
    - Add a dedicated eastbound right turn lane and a dedicated westbound left turn lane on Church Road for traffic entering the proposed development.
    - Provide a shared left / through / right turn lane on the northbound approach for exiting traffic.
    - The North Site Driveway 2 should be controlled with a stop sign, with Church Road remaining free flow.

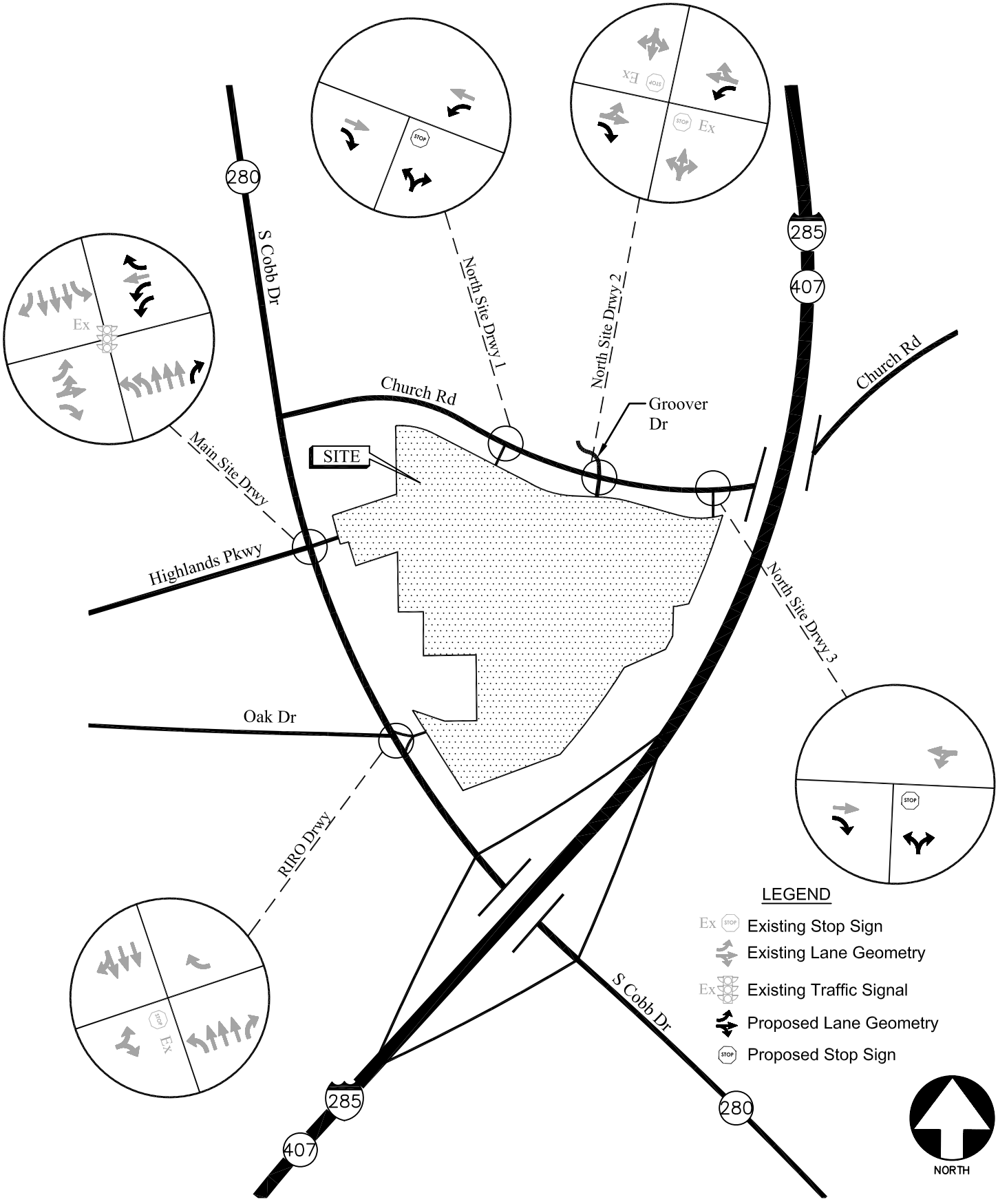
- Church Road / North Site Driveway 3
    - It is recommended that the intersection have a stop controlled side street (North Site Driveway 3), with Church Road remaining free flow.
    - Add a dedicated eastbound right turn lane on Church Road for traffic entering the proposed development.
    - Provide a shared left / right turn lane on the northbound approach for exiting traffic.

The recommended traffic control and lane geometry for the site driveways is shown in Figure 13.



FUTURE 2009 SITE ACCESS PEAK HOUR VOLUMES FIGURE 12

A&R Engineering Inc.



FUTURE 2009 SITE ACCESS TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 13

A&R Engineering Inc.

10. NON-EXPEDITED CRITERIA

1. Quality, Character, Convenience, and Flexibility of Transportation Options
CCT bus route 70 currently serves the proposed site and a bus stop is located on South Cobb Drive between Oak Drive and Highlands Parkway.

2. Vehicle Miles Traveled
The table below displays the reductions in trip generation due to mixed-use and pass-by reductions.

24-hour Trip Generation	17,572
- Pass-by Reductions	-4,110
- Existing Apartment Trip Reduction	-2.406
- Existing Gas Station Trip Reduction	-2,202
Net Trips:	8,585

3. Relationship Between Location of Proposed DRI and Regional Mobility
The proposed DRI is currently served by one CCT bus route.

4. Relationship Between Proposed DRI and Existing or Planned Transit Facilities
CCT bus route 70 currently serves the proposed site and a bus stop on South Cobb Drive is located across from the site. Details for CCT bus 70 is included in the Appendix.

5. Transportation Management Area Designation
The area around the proposed project is not designated as a transportation management area.

6. Offsite Trip Reduction and Trip Reduction Techniques
Due to the nature of the development, there will be significant mixed-use and pass by trip reductions. These reductions have been applied for the AM peak hour, PM peak hour and 24-hour trips projected to be generated by the site. In addition, the site is currently generating traffic. These existing uses will be closed and demolished as part of redevelopment. Accordingly, the trips generated by these uses will cease to occur.

7. Balance of Land Uses – Jobs/Housing Balance
Please refer to the AOI study submitted along with this report.

8. Relationships Between Proposed DRI and Existing Development and Infrastructure
The proposed DRI is located in an area where adequate public facilities will be available to serve the proposed development. Cobb County Water and Sewer authority will provide water and wastewater services for the development. Regarding transportation, the traffic study has identified transportation improvements relating to the site access, along with improvements to the surrounding roadway network, which will allow traffic in the area to operate at the LOS standard.

10.2 Pedestrian and Internal Circulation

The proposed project will provide pedestrian walkways in all directions to connect the site with adjacent pedestrian facilities. The network of sidewalks will provide adequate pedestrian access to the various land uses within the development.

Internal roadways will provide adequate circulation of vehicular traffic as designed in the site plan. Vehicles exiting the site will be able to move internally to the site exit without experiencing excessive delays.

11. Other Pertinent Information

At this time no other pertinent information is available with regards to this development. All significant characteristics of the proposed development are fully discussed within this report. Additionally, an Area of Influence study has been prepared and submitted along with the traffic analysis.

12. Significant Impact Analysis

Due to the annual growth in the county in addition to the site generated traffic a number of intersection improvements will be required to bring the intersections in the vicinity of the site to the LOS standard. Even with the annual growth and the addition of the site generated traffic, the implementation of the recommended improvements will allow all intersections in the study area network to operate at acceptable levels of service.

Appendix

Appendix Table of Contents

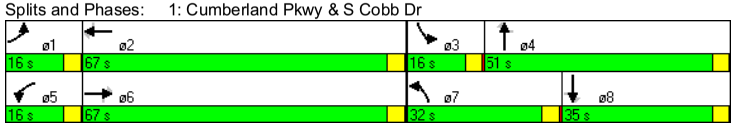
Existing Intersection Analysis

Existing PM Intersection Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			95			31			54			94
Volume (vph)	167	855	123	129	1916	122	536	1147	102	195	844	92
Lane Group Flow (vph)	192	891	145	143	2017	136	583	1274	124	219	870	116
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	16.0	67.0	35.0	16.0	67.0	51.0	32.0	51.0	67.0	16.0	35.0	67.0
Act Effct Green (s)	12.0	63.0	31.4	12.0	63.0	47.0	27.4	47.0	63.0	11.8	31.4	63.0
Actuated g/C Ratio	0.08	0.42	0.21	0.08	0.42	0.31	0.18	0.31	0.42	0.08	0.21	0.42
v/c Ratio	1.35	0.60	0.36	1.01	1.36	0.26	0.93	1.15	0.18	0.81	1.17	0.16
Control Delay	246.4	35.7	21.6	144.0	199.8	31.0	82.1	122.9	15.8	89.7	141.8	7.9
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	246.4	35.7	21.6	144.0	199.8	31.0	82.1	122.9	15.8	89.7	141.8	7.9
LOS	F	D	C	F	F	C	F	F	B	F	F	A
Approach Delay		67.0			186.4			104.2			119.4	
Approach LOS		E			F			F			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 149.8			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.36			
Intersection Signal Delay: 128.2		Intersection LOS: F	
Intersection Capacity Utilization 114.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



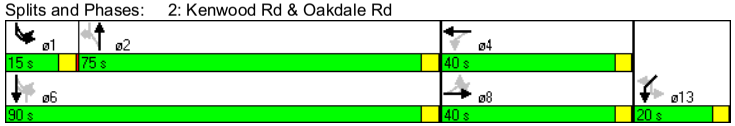
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	167	855	123	129	1916	122	536	1147	102	195	844	92
Peak-hour factor, PHF	0.87	0.96	0.85	0.90	0.95	0.90	0.92	0.90	0.82	0.89	0.97	0.79
Adj. Flow (vph)	192	891	145	143	2017	136	583	1274	124	219	870	116
RTOR Reduction (vph)	0	0	75	0	0	21	0	0	31	0	0	54
Lane Group Flow (vph)	192	891	70	143	2017	115	583	1274	93	219	870	62
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	63.0	31.4	12.0	63.0	47.0	27.4	47.0	63.0	11.8	31.4	63.0
Effective Green, g (s)	12.0	63.0	31.4	12.0	63.0	47.0	27.4	47.0	63.0	11.8	31.4	63.0
Actuated g/C Ratio	0.08	0.42	0.21	0.08	0.42	0.31	0.18	0.31	0.42	0.08	0.21	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	142	1488	332	142	1488	497	628	1110	666	270	742	666
v/s Ratio Prot	c0.11	0.25		0.08	c0.57		c0.17	c0.36		0.06	0.25	
v/s Ratio Perm			0.04			0.07			0.06			0.04
v/c Ratio	1.35	0.60	0.21	1.01	1.36	0.23	0.93	1.15	0.14	0.81	1.17	0.09
Uniform Delay, d1	68.9	33.6	49.0	68.9	43.4	38.0	60.2	51.4	26.7	67.9	59.2	26.2
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	197.5	1.8	0.3	77.4	164.5	0.2	20.0	77.3	0.4	16.7	91.6	0.3
Delay (s)	266.4	35.4	49.3	146.3	207.9	38.3	80.2	128.7	27.1	84.6	150.8	26.4
Level of Service	F	D	D	F	F	D	F	F	C	F	F	C
Approach Delay (s)		73.2			194.0			108.1			126.8	
Approach LOS		E			F			F			F	

Intersection Summary					
HCM Average Control Delay	134.4	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.25				
Actuated Cycle Length (s)	149.8	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	114.2%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	1723	0	1770	1641	0	0	1770	5075	0	1583
Flt Permitted			0.718		0.615				0.234			
Satd. Flow (perm)	0	0	1263	0	1146	1641	0	0	436	5075	0	1583
Satd. Flow (RTOR)			22			1						48
Volume (vph)	35	3	18	40	346	38	142	6	95	1717	27	94
Lane Group Flow (vph)	0	0	128	0	357	191	0	0	96	1761	0	95
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Total Split (s)	40.0	40.0	40.0	0.0	40.0	40.0	0.0	0.0	75.0	75.0	0.0	90.0
Act Effct Green (s)			36.0		36.0	36.0			76.7	76.7		86.0
Actuated g/C Ratio			0.24		0.24	0.24			0.51	0.51		0.57
v/c Ratio			0.40		1.30	0.48			0.43	0.68		0.10
Control Delay			43.8		202.6	53.6			25.6	25.8		5.9
Queue Delay			0.0		0.0	0.0			0.0	2.5		0.0
Total Delay			43.8		202.6	53.6			25.6	28.3		5.9
LOS			D		F	D			C	C		A
Approach Delay			43.8			150.6				27.1		
Approach LOS			D			F				C		

Intersection Summary		
Cycle Length: 150		
Actuated Cycle Length: 150		
Offset: 140 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.30		
Intersection Signal Delay: 44.4	Intersection LOS: D	
Intersection Capacity Utilization 86.0%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 2: Kenwood Rd & Oakdale Rd



Lane Group	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	1770	5085	1583	0	1770	1583	0
Flt Permitted		0.053				0.950		
Satd. Flow (perm)	0	99	5085	1583	0	1770	1583	0
Satd. Flow (RTOR)				32			9	
Volume (vph)	2	45	1123	31	4	132	10	8
Lane Group Flow (vph)	0	48	1146	32	0	155	20	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Total Split (s)	15.0	15.0	90.0	75.0	20.0	20.0	20.0	0.0
Act Effct Green (s)		86.0	86.0	76.7		16.0	16.0	
Actuated g/C Ratio		0.57	0.57	0.51		0.11	0.11	
v/c Ratio		0.35	0.39	0.04		0.82	0.11	
Control Delay		21.0	18.1	6.3		96.7	42.5	
Queue Delay		0.0	0.0	0.0		0.0	0.0	
Total Delay		21.0	18.1	6.3		96.7	42.5	
LOS		C	B	A		F	D	
Approach Delay			17.9			90.5		
Approach LOS			B			F		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Lane Util. Factor			1.00		1.00	1.00			1.00	0.91		1.00
Frt			0.94		1.00	0.88			1.00	1.00		0.85
Flt Protected			0.98		0.95	1.00			0.95	1.00		1.00
Satd. Flow (prot)			1724		1770	1640			1770	5074		1583
Flt Permitted			0.72		0.61	1.00			0.22	1.00		1.00
Satd. Flow (perm)			1263		1145	1640			408	5074		1583
Volume (vph)	35	3	18	40	346	38	142	6	95	1717	27	94
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.97	0.97	0.97	0.97	0.99	0.99	0.99	0.99
Adj. Flow (vph)	47	4	24	53	357	39	146	6	96	1734	27	95
RTOR Reduction (vph)	0	0	17	0	0	1	0	0	0	0	0	20
Lane Group Flow (vph)	0	0	111	0	357	190	0	0	96	1761	0	75
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Actuated Green, G (s)			36.0		36.0	36.0			75.9	75.9		86.0
Effective Green, g (s)			36.0		36.0	36.0			75.9	75.9		86.0
Actuated g/C Ratio			0.24		0.24	0.24			0.51	0.51		0.57
Clearance Time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)			3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)			303		275	394			206	2567		908
v/s Ratio Prot						0.12				c0.35		
v/s Ratio Perm			0.09		c0.31				0.24			0.05
v/c Ratio			0.37		1.30	0.48			0.47	0.69		0.08
Uniform Delay, d1			47.5		57.0	49.0			24.0	28.0		14.3
Progression Factor			1.00		1.00	1.00			0.81	0.88		0.76
Incremental Delay, d2			0.8		158.3	0.9			5.7	1.2		0.1
Delay (s)			48.3		215.3	49.9			25.0	25.7		11.1
Level of Service			D		F	D			C	C		B
Approach Delay (s)			48.3			157.7				25.0		
Approach LOS			D			F				C		

Intersection Summary			
HCM Average Control Delay	44.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

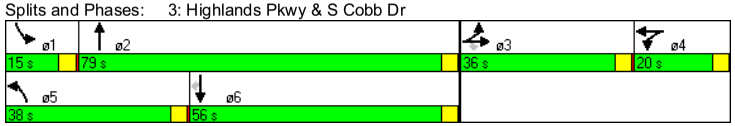
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5085	1583		1770	1583	
Flt Permitted		0.06	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		110	5085	1583		1770	1583	
Volume (vph)	2	45	1123	31	4	132	10	8
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.88	0.88	0.88	0.88
Adj. Flow (vph)	2	46	1146	32	5	150	11	9
RTOR Reduction (vph)	0	0	0	16	0	0	8	0
Lane Group Flow (vph)	0	48	1146	16	0	155	12	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Actuated Green, G (s)		86.0	86.0	75.9		16.0	16.0	
Effective Green, g (s)		86.0	86.0	75.9		16.0	16.0	
Actuated g/C Ratio		0.57	0.57	0.51		0.11	0.11	
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		131	2915	801		189	169	
v/s Ratio Prot		0.01	c0.23					
v/s Ratio Perm		0.20		0.01		0.09	0.01	
v/c Ratio		0.37	0.39	0.02		0.82	0.07	
Uniform Delay, d1		21.3	17.6	18.5		65.6	60.3	
Progression Factor		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7	0.4	0.0		31.3	0.8	
Delay (s)		23.0	18.0	18.5		96.9	61.1	
Level of Service		C	B	B		F	E	
Approach Delay (s)			18.2			92.8		
Approach LOS			B			F		

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1692	1583	0	1762	0	3433	5070	0	1770	5085	1583
Flt Permitted	0.950	0.956			0.980		0.950			0.950		
Satd. Flow (perm)	1681	1692	1583	0	1762	0	3433	5070	0	1770	5085	1583
Satd. Flow (RTOR)			435		9			3				180
Volume (vph)	598	19	468	48	39	27	456	1353	23	25	1000	495
Lane Group Flow (vph)	323	341	498	0	140	0	490	1423	0	32	1031	544
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Total Split (s)	36.0	36.0	36.0	20.0	20.0	0.0	38.0	79.0	0.0	15.0	56.0	56.0
Act Effct Green (s)	31.6	31.6	31.6		14.5		25.7	83.8		8.1	62.1	62.1
Actuated g/C Ratio	0.21	0.21	0.21		0.10		0.17	0.56		0.05	0.41	0.41
v/c Ratio	0.91	0.96	0.74		0.78		0.83	0.50		0.33	0.49	0.71
Control Delay	87.3	95.4	15.4		89.6		63.5	22.8		79.9	23.1	18.3
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.1		0.0	0.2	0.5
Total Delay	87.3	95.4	15.4		89.6		63.5	22.9		79.9	23.3	18.9
LOS	F	F	B		F		E	C		E	C	B
Approach Delay		58.9			89.6			33.3			22.9	
Approach LOS		E			F			C			C	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 115 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 37.6		Intersection LOS: D	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



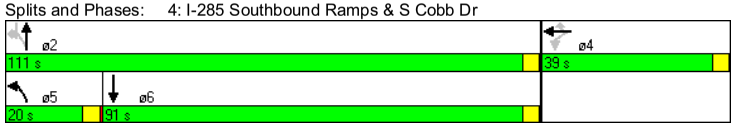
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		0.97	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1692	1583		1763		3433	5070		1770	5085	1583
Flt Permitted	0.95	0.96	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1692	1583		1763		3433	5070		1770	5085	1583
Volume (vph)	598	19	468	48	39	27	456	1353	23	25	1000	495
Peak-hour factor, PHF	0.94	0.68	0.94	0.86	0.81	0.75	0.93	0.97	0.82	0.78	0.97	0.91
Adj. Flow (vph)	636	28	498	56	48	36	490	1395	28	32	1031	544
RTOR Reduction (vph)	0	0	343	0	8	0	0	1	0	0	0	105
Lane Group Flow (vph)	323	341	155	0	132	0	490	1422	0	32	1031	439
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	31.6	31.6	31.6		14.5		25.7	82.2		5.7	62.2	62.2
Effective Green, g (s)	31.6	31.6	31.6		14.5		25.7	82.2		5.7	62.2	62.2
Actuated g/C Ratio	0.21	0.21	0.21		0.10		0.17	0.55		0.04	0.41	0.41
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	354	356	333		170		588	2778		67	2109	656
v/s Ratio Prot	0.19	c0.20			c0.07		c0.14	0.28		0.02	0.20	
v/s Ratio Perm			0.10									c0.28
v/c Ratio	0.91	0.96	0.46		0.78		0.83	0.51		0.48	0.49	0.67
Uniform Delay, d1	57.8	58.5	51.8		66.2		60.1	21.3		70.7	32.2	35.6
Progression Factor	1.00	1.00	1.00		1.00		0.92	1.04		1.07	0.67	0.53
Incremental Delay, d2	26.9	36.3	1.0		19.6		6.7	0.4		4.2	0.6	4.2
Delay (s)	84.8	94.8	52.8		85.7		61.8	22.5		80.1	22.2	23.2
Level of Service	F	F	D		F		E	C		F	C	C
Approach Delay (s)		74.0			85.7			32.6			23.7	
Approach LOS		E			F			C			C	

Intersection Summary					
HCM Average Control Delay	41.2	HCM Level of Service	D		
HCM Volume to Capacity ratio	0.78				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0		
Intersection Capacity Utilization	66.1%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1443	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950	0.999		0.207					
Satd. Flow (perm)	0	0	0	1681	1443	1504	386	3539	0	0	3539	1583
Satd. Flow (RTOR)					107	107						785
Volume (vph)	0	0	0	411	0	924	67	1214	0	0	941	730
Lane Group Flow (vph)	0	0	0	426	520	514	80	1252	0	0	991	785
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	39.0	39.0	39.0	20.0	111.0	0.0	0.0	91.0	111.0
Act Effct Green (s)				35.0	35.0	35.0	107.0	107.0			97.5	107.0
Actuated g/C Ratio				0.23	0.23	0.23	0.71	0.71			0.65	0.71
v/c Ratio				1.09	1.24	1.19	0.25	0.50			0.43	0.58
Control Delay				123.3	164.4	143.7	0.9	1.2			6.0	4.8
Queue Delay				7.6	7.9	0.0	0.0	0.4			0.0	0.0
Total Delay				131.0	172.2	143.7	0.9	1.6			6.0	4.8
LOS				F	F	F	A	A			A	A
Approach Delay					150.2			1.6			5.5	
Approach LOS					F			A			A	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 122 (81%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.24			
Intersection Signal Delay: 50.6		Intersection LOS: D	
Intersection Capacity Utilization 129.0%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



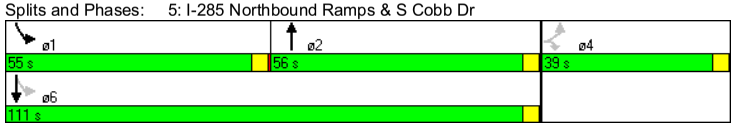
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.85	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1443	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.23	1.00			1.00	1.00
Satd. Flow (perm)				1681	1443	1504	425	3539			3539	1583
Volume (vph)	0	0	0	411	0	924	67	1214	0	0	941	730
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.92	0.90	0.84	0.97	0.92	0.92	0.95	0.93
Adj. Flow (vph)	0	0	0	433	0	1027	80	1252	0	0	991	785
RTOR Reduction (vph)	0	0	0	0	82	82	0	0	0	0	0	225
Lane Group Flow (vph)	0	0	0	426	438	432	80	1252	0	0	991	560
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				35.0	35.0	35.0	107.0	107.0			97.5	107.0
Effective Green, g (s)				35.0	35.0	35.0	107.0	107.0			97.5	107.0
Actuated g/C Ratio				0.23	0.23	0.23	0.71	0.71			0.65	0.71
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				392	337	351	352	2524			2300	1129
v/s Ratio Prot							0.01	c0.35			0.28	
v/s Ratio Perm				0.25	0.30	0.29	0.15					0.35
v/c Ratio				1.09	1.30	1.23	0.23	0.50			0.43	0.50
Uniform Delay, d1				57.5	57.5	57.5	8.3	9.5			12.8	9.5
Progression Factor				1.00	1.00	1.00	0.05	0.10			0.42	6.73
Incremental Delay, d2				70.8	155.0	126.3	0.1	0.2			0.5	1.4
Delay (s)				128.3	212.5	183.8	0.5	1.2			5.9	65.6
Level of Service				F	F	F	A	A			A	E
Approach Delay (s)		0.0			177.8			1.2			32.3	
Approach LOS		A			F			A			C	

Intersection Summary					
HCM Average Control Delay	69.7	HCM Level of Service		E	
HCM Volume to Capacity ratio	0.69				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	129.0%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3330	0	1770	3539	0
Flt Permitted	0.950									0.169		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3330	0	315	3539	0
Satd. Flow (RTOR)			87					112				
Volume (vph)	858	0	75	0	0	0	0	442	265	701	620	0
Lane Group Flow (vph)	876	0	88	0	0	0	0	787	0	746	667	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Total Split (s)	39.0	0.0	39.0	0.0	0.0	0.0	0.0	56.0	0.0	55.0	111.0	0.0
Act Effct Green (s)	35.0		35.0					52.0		107.0	107.0	
Actuated g/C Ratio	0.23		0.23					0.35		0.71	0.71	
v/c Ratio	1.09		0.20					0.64		1.04	0.26	
Control Delay	112.9		9.9					37.7		75.4	8.3	
Queue Delay	0.0		0.0					0.0		91.4	0.4	
Total Delay	112.9		9.9					37.7		166.8	8.7	
LOS	F		A					D		F	A	
Approach Delay								37.7			92.1	
Approach LOS								D			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 101 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 82.1		Intersection LOS: F	
Intersection Capacity Utilization 129.0%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00					0.95		1.00	0.95	
Frt	1.00		0.85					0.94		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433		1583					3329		1770	3539	
Flt Permitted	0.95		1.00					1.00		0.17	1.00	
Satd. Flow (perm)	3433		1583					3329		314	3539	
Volume (vph)	858	0	75	0	0	0	0	442	265	701	620	0
Peak-hour factor, PHF	0.98	0.92	0.85	0.92	0.92	0.92	0.92	0.93	0.85	0.94	0.93	0.92
Adj. Flow (vph)	876	0	88	0	0	0	0	475	312	746	667	0
RTOR Reduction (vph)	0	0	67	0	0	0	0	73	0	0	0	0
Lane Group Flow (vph)	876	0	21	0	0	0	0	714	0	746	667	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	35.0		35.0					52.0		107.0	107.0	
Effective Green, g (s)	35.0		35.0					52.0		107.0	107.0	
Actuated g/C Ratio	0.23		0.23					0.35		0.71	0.71	
Clearance Time (s)	4.0		4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	801		369					1154		719	2524	
v/s Ratio Prot								0.21		c0.35	0.19	
v/s Ratio Perm	c0.26		0.01							c0.39		
v/c Ratio	1.09		0.06					0.62		1.04	0.26	
Uniform Delay, d1	57.5		44.7					40.8		36.1	7.6	
Progression Factor	1.00		1.00					1.00		1.09	1.06	
Incremental Delay, d2	60.4		0.1					2.5		39.7	0.2	
Delay (s)	117.9		44.8					43.2		79.2	8.2	
Level of Service	F		D					D		E	A	
Approach Delay (s)		111.3			0.0			43.2			45.7	
Approach LOS		F			A			D			D	

Intersection Summary					
HCM Average Control Delay	65.1	HCM Level of Service		E	
HCM Volume to Capacity ratio	1.04				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	129.0%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1820	0	0	1837	0	0	1762	0	0	1681	0
Flt Permitted		0.980						0.982			0.981	
Satd. Flow (perm)	0	1820	0	0	1837	0	0	1762	0	0	1681	0
Volume (vph)	64	100	1	0	331	34	8	9	6	104	2	147
Lane Group Flow (vph)	0	188	0	0	396	0	0	44	0	0	297	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	64	100	1	0	331	34	8	9	6	104	2	147
Peak Hour Factor	0.84	0.93	0.25	0.92	0.93	0.85	0.50	0.56	0.50	0.90	0.50	0.83
Hourly flow rate (vph)	76	108	4	0	356	40	16	16	12	116	4	177
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	356			112			817	618	110	658	640	376
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	356			112			817	618	110	658	640	376
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			100			92	96	99	66	99	74
cM capacity (veh/h)	1203			1478			205	379	944	343	369	671

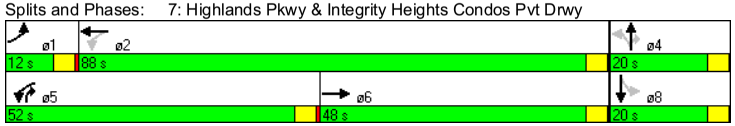
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	188	396	44	297
Volume Left	76	0	16	116
Volume Right	4	40	12	177
cSH	1203	1478	331	485
Volume to Capacity	0.06	0.00	0.13	0.61
Queue Length 95th (ft)	5	0	11	101
Control Delay (s)	3.7	0.0	17.5	23.4
Lane LOS	A		C	C
Approach Delay (s)	3.7	0.0	17.5	23.4
Approach LOS			C	C

Intersection Summary				
Average Delay		9.1		
Intersection Capacity Utilization	59.2%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3412	0	1770	3511	0	1770	1863	1583	0	1787	0
Flt Permitted	0.950			0.083			0.721				0.878	
Satd. Flow (perm)	1770	3412	0	155	3511	0	1343	1863	1583	0	1606	0
Satd. Flow (RTOR)		40			11				60		5	
Volume (vph)	5	733	222	600	411	13	77	2	353	20	16	3
Lane Group Flow (vph)	8	1052	0	632	457	0	104	4	364	0	60	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Total Split (s)	12.0	48.0	0.0	52.0	88.0	0.0	20.0	20.0	52.0	20.0	20.0	0.0
Act Effct Green (s)	6.2	48.5		89.4	88.3		12.4	12.4	50.6		12.1	
Actuated g/C Ratio	0.05	0.45		0.83	0.82		0.11	0.11	0.47		0.11	
v/c Ratio	0.08	0.67		0.92	0.16		0.68	0.02	0.47		0.33	
Control Delay	57.0	28.9		46.6	3.2		70.2	45.0	16.0		47.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	57.0	28.9		46.6	3.2		70.2	45.0	16.0		47.5	
LOS	E	C		D	A		E	D	B		D	
Approach Delay		29.1			28.4			28.2			47.5	
Approach LOS		C			C			C			D	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 107.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 29.1		Intersection LOS: C	
Intersection Capacity Utilization 79.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: Highlands Pkwy & Integrity Heights Condos Pvt Drwy



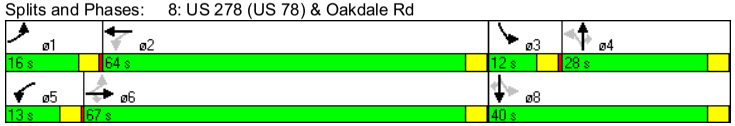
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3411		1770	3511		1770	1863	1583		1788	
Flt Permitted	0.95	1.00		0.14	1.00		0.73	1.00	1.00		0.86	
Satd. Flow (perm)	1770	3411		267	3511		1353	1863	1583		1576	
Volume (vph)	5	733	222	600	411	13	77	2	353	20	16	3
Peak-hour factor, PHF	0.62	0.92	0.87	0.95	0.95	0.54	0.74	0.50	0.97	0.71	0.67	0.38
Adj. Flow (vph)	8	797	255	632	433	24	104	4	364	28	24	8
RTOR Reduction (vph)	0	21	0	0	2	0	0	0	34	0	5	0
Lane Group Flow (vph)	8	1031	0	632	455	0	104	4	330	0	55	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Actuated Green, G (s)	1.3	51.9		92.7	87.4		10.7	10.7	47.5		10.7	
Effective Green, g (s)	1.3	51.9		92.7	87.4		10.7	10.7	47.5		10.7	
Actuated g/C Ratio	0.01	0.47		0.83	0.78		0.10	0.10	0.43		0.10	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	21	1589		719	2755		130	179	732		151	
v/s Ratio Prot	0.00	0.30		c0.29	0.13			0.00	0.15			
v/s Ratio Perm				c0.44			c0.08		0.06		0.04	
v/c Ratio	0.38	0.65		0.88	0.17		0.80	0.02	0.45		0.37	
Uniform Delay, d1	54.7	22.8		24.4	3.0		49.3	45.6	22.7		47.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	11.2	0.9		11.8	0.1		28.6	0.1	0.4		1.5	
Delay (s)	65.8	23.7		36.2	3.1		77.9	45.7	23.1		48.7	
Level of Service	E	C		D	A		E	D	C		D	
Approach Delay (s)		24.0			22.3			35.4			48.7	
Approach LOS		C			C			D			D	

Intersection Summary					
HCM Average Control Delay	25.9	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.86				
Actuated Cycle Length (s)	111.4	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	79.4%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3500	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.063			0.446			0.457			0.482		
Satd. Flow (perm)	117	3539	1583	831	3500	0	851	1863	1583	898	1863	1583
Satd. Flow (RTOR)			76		10				112			167
Volume (vph)	133	461	68	207	1243	97	75	125	94	97	320	422
Lane Group Flow (vph)	145	501	76	225	1459	0	88	136	112	115	348	449
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Total Split (s)	16.0	67.0	67.0	13.0	64.0	0.0	28.0	28.0	28.0	12.0	40.0	40.0
Act Effct Green (s)	72.8	63.2	63.2	71.1	62.4		16.7	16.7	16.7	28.5	28.5	28.5
Actuated g/C Ratio	0.65	0.56	0.56	0.63	0.55		0.15	0.15	0.15	0.25	0.25	0.25
v/c Ratio	0.67	0.25	0.08	0.38	0.75		0.70	0.49	0.34	0.40	0.74	0.85
Control Delay	36.7	13.9	3.4	10.0	23.7		73.2	49.8	10.4	37.2	48.4	40.9
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	36.7	13.9	3.4	10.0	23.7		73.2	49.8	10.4	37.2	48.4	40.9
LOS	D	B	A	A	C		E	D	B	D	D	D
Approach Delay		17.4			21.8			42.8			43.3	
Approach LOS		B			C			D			D	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 112.5			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 79.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: US 278 (US 78) & Oakdale Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3500		1770	1863	1583	1770	1863	1583
Flt Permitted	0.08	1.00	1.00	0.44	1.00		0.41	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	155	3539	1583	823	3500		762	1863	1583	776	1863	1583
Volume (vph)	133	461	68	207	1243	97	75	125	94	97	320	422
Peak-hour factor, PHF	0.92	0.92	0.90	0.92	0.92	0.90	0.85	0.92	0.84	0.84	0.92	0.94
Adj. Flow (vph)	145	501	76	225	1351	108	88	136	112	115	348	449
RTOR Reduction (vph)	0	0	33	0	4	0	0	0	95	0	0	125
Lane Group Flow (vph)	145	501	43	225	1455	0	88	136	17	115	348	324
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)	72.9	63.3	63.3	71.1	62.4		16.7	16.7	16.7	28.5	28.5	28.5
Effective Green, g (s)	72.9	63.3	63.3	71.1	62.4		16.7	16.7	16.7	28.5	28.5	28.5
Actuated g/C Ratio	0.65	0.56	0.56	0.63	0.55		0.15	0.15	0.15	0.25	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	238	1991	891	593	1941		113	277	235	266	472	401
v/s Ratio Prot	c0.05	0.14		0.03	c0.42			0.07		0.03	0.19	
v/s Ratio Perm	0.34		0.03	0.21			0.12		0.01	0.08		c0.20
v/c Ratio	0.61	0.25	0.05	0.38	0.75		0.78	0.49	0.07	0.43	0.74	0.81
Uniform Delay, d1	16.7	12.5	11.1	8.8	19.1		46.1	44.0	41.2	33.8	38.6	39.4
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	4.4	0.3	0.1	0.4	2.7		27.9	1.4	0.1	1.1	5.9	11.4
Delay (s)	21.1	12.8	11.2	9.2	21.8		74.1	45.4	41.4	35.0	44.5	50.8
Level of Service	C	B	B	A	C		E	D	D	C	D	D
Approach Delay (s)		14.3			20.1			51.5			46.4	
Approach LOS		B			C			D			D	

Intersection Summary					
HCM Average Control Delay	28.4	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.75				
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	79.1%	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												
Satd. Flow (prot)	0	1619	0	0	0	1611	1770	5085	1583	0	5060	0
Flt Permitted		0.998					0.950					
Satd. Flow (perm)	0	1619	0	0	0	1611	1770	5085	1583	0	5060	0
Volume (vph)	8	0	245	0	0	87	412	1686	114	0	1459	43
Lane Group Flow (vph)	0	281	0	0	0	104	438	1720	128	0	1588	0
Sign Control		Stop			Yield			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection has too many lanes per leg.
HCM All-Way analysis is limited to two lanes per leg.
Channelized right turn lanes are not counted.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1814	0	0	1859	0	0	1729	0	0	1611	0
Flt Permitted					0.998			0.966				
Satd. Flow (perm)	0	1814	0	0	1859	0	0	1729	0	0	1611	0
Volume (vph)	0	136	20	14	512	0	14	0	7	0	0	3
Lane Group Flow (vph)	0	208	0	0	559	0	0	28	0	0	8	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	136	20	14	512	0	14	0	7	0	0	3
Peak Hour Factor	0.92	0.81	0.50	0.70	0.95	0.92	0.70	0.92	0.88	0.92	0.92	0.38
Hourly flow rate (vph)	0	168	40	20	539	0	20	0	8	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	539			208			775	767	188	775	787	539
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	539			208			775	767	188	775	787	539
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			93	100	99	100	100	99
cM capacity (veh/h)	1029			1363			307	328	854	309	319	543

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	208	559	28	8
Volume Left	0	20	20	0
Volume Right	40	0	8	8
cSH	1029	1363	376	543
Volume to Capacity	0.00	0.01	0.07	0.01
Queue Length 95th (ft)	0	1	6	1
Control Delay (s)	0.0	0.4	15.4	11.7
Lane LOS		A	C	B
Approach Delay (s)	0.0	0.4	15.4	11.7
Approach LOS			C	B

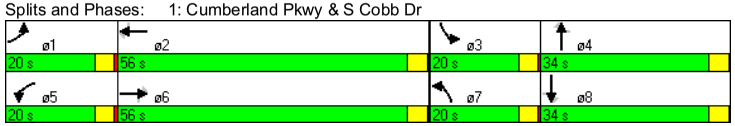
Intersection Summary					
Average Delay		1.0			
Intersection Capacity Utilization	52.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Existing SAT Intersection Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			232			73			77			120
Volume (vph)	128	795	239	117	805	140	337	894	108	235	873	118
Lane Group Flow (vph)	152	828	275	136	958	147	362	951	120	261	919	140
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	20.0	56.0	34.0	20.0	56.0	34.0	20.0	34.0	56.0	20.0	34.0	56.0
Act Effct Green (s)	14.4	52.7	30.0	13.8	52.0	31.5	15.6	31.5	52.7	14.2	30.0	52.0
Actuated g/C Ratio	0.11	0.41	0.23	0.11	0.41	0.25	0.12	0.25	0.41	0.11	0.23	0.41
v/c Ratio	0.76	0.57	0.50	0.72	0.67	0.33	0.86	1.09	0.17	0.69	1.11	0.20
Control Delay	79.2	31.3	12.1	76.0	34.1	23.2	76.0	104.3	10.7	64.8	110.5	6.7
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	79.2	31.3	12.1	76.0	34.1	23.2	76.0	104.3	10.7	64.8	110.5	6.7
LOS	E	C	B	E	C	C	E	F	B	E	F	A
Approach Delay		32.9			37.4			89.3			90.4	
Approach LOS		C			D			F			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 128.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 63.8		Intersection LOS: E	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



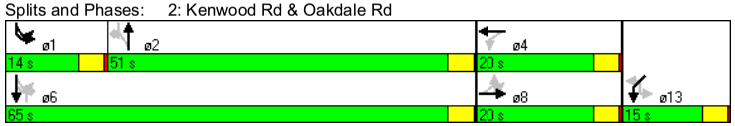
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	128	795	239	117	805	140	337	894	108	235	873	118
Peak-hour factor, PHF	0.84	0.96	0.87	0.86	0.84	0.95	0.93	0.94	0.90	0.90	0.95	0.84
Adj. Flow (vph)	152	828	275	136	958	147	362	951	120	261	919	140
RTOR Reduction (vph)	0	0	178	0	0	55	0	0	45	0	0	71
Lane Group Flow (vph)	152	828	97	136	958	92	362	951	75	261	919	69
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	14.4	52.7	30.1	13.8	52.1	31.5	15.6	31.5	52.7	14.2	30.1	52.1
Effective Green, g (s)	14.4	52.7	30.1	13.8	52.1	31.5	15.6	31.5	52.7	14.2	30.1	52.1
Actuated g/C Ratio	0.11	0.41	0.23	0.11	0.41	0.25	0.12	0.25	0.41	0.11	0.23	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	199	1455	372	191	1438	389	418	870	651	380	831	643
v/s Ratio Prot	c0.09	0.23		0.08	c0.27		c0.11	c0.27		0.08	0.26	
v/s Ratio Perm			0.06			0.06			0.05			0.04
v/c Ratio	0.76	0.57	0.26	0.71	0.67	0.24	0.87	1.09	0.11	0.69	1.11	0.11
Uniform Delay, d1	55.2	29.0	40.0	55.3	31.0	38.7	55.3	48.3	23.3	54.9	49.0	23.6
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	15.9	1.6	0.4	11.8	2.5	0.3	16.9	59.1	0.4	5.1	64.4	0.3
Delay (s)	71.1	30.6	40.4	67.1	33.4	39.0	72.2	107.5	23.7	60.0	113.4	23.9
Level of Service	E	C	D	E	C	D	E	F	C	E	F	C
Approach Delay (s)		37.7			37.8			91.5			93.4	
Approach LOS		D			D			F			F	

Intersection Summary					
HCM Average Control Delay	66.4	HCM Level of Service		E	
HCM Volume to Capacity ratio	0.81				
Actuated Cycle Length (s)	128.2	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	76.4%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	1709	0	1770	1630	0	0	1770	5075	0	1583
Flt Permitted			0.832		0.566				0.171			
Satd. Flow (perm)	0	0	1452	0	1054	1630	0	0	319	5075	0	1583
Satd. Flow (RTOR)			38			4						62
Volume (vph)	51	6	13	62	89	11	48	5	86	1230	17	60
Lane Group Flow (vph)	0	0	152	0	100	72	0	0	89	1286	0	62
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Total Split (s)	20.0	20.0	20.0	0.0	20.0	20.0	0.0	0.0	51.0	51.0	0.0	65.0
Act Effct Green (s)			13.3		13.3	13.3			54.3	54.3		61.0
Actuated g/C Ratio			0.13		0.13	0.13			0.54	0.54		0.61
v/c Ratio			0.68		0.71	0.33			0.51	0.47		0.06
Control Delay			45.4		68.2	40.1			24.1	9.1		1.3
Queue Delay			0.0		0.0	0.0			0.0	0.0		0.0
Total Delay			45.4		68.2	40.1			24.1	9.1		1.3
LOS			D		E	D			C	A		A
Approach Delay			45.4			56.4				9.7		
Approach LOS			D			E				A		

Intersection Summary		
Cycle Length: 100		
Actuated Cycle Length: 100		
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.71		
Intersection Signal Delay: 15.0	Intersection LOS: B	
Intersection Capacity Utilization 62.2%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 2: Kenwood Rd & Oakdale Rd



Lane Group	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	1770	5085	1583	0	1770	1583	0
Flt Permitted		0.128				0.950		
Satd. Flow (perm)	0	238	5085	1583	0	1770	1583	0
Satd. Flow (RTOR)				46			12	
Volume (vph)	9	36	1363	43	3	60	4	11
Lane Group Flow (vph)	0	48	1450	46	0	68	16	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Total Split (s)	14.0	14.0	65.0	51.0	15.0	15.0	15.0	0.0
Act Effct Green (s)		61.0	61.0	54.3		13.7	13.7	
Actuated g/C Ratio		0.61	0.61	0.54		0.14	0.14	
v/c Ratio		0.20	0.47	0.05		0.28	0.07	
Control Delay		9.7	11.3	4.2		43.9	24.3	
Queue Delay		0.0	0.0	0.0		0.0	0.0	
Total Delay		9.7	11.3	4.2		43.9	24.3	
LOS		A	B	A		D	C	
Approach Delay			11.0			40.2		
Approach LOS			B			D		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Lane Util. Factor			1.00		1.00	1.00			1.00	0.91		1.00
Frt			0.94		1.00	0.88			1.00	1.00		0.85
Flt Protected			0.98		0.95	1.00			0.95	1.00		1.00
Satd. Flow (prot)			1708		1770	1630			1770	5075		1583
Flt Permitted			0.83		0.54	1.00			0.16	1.00		1.00
Satd. Flow (perm)			1442		1002	1630			294	5075		1583
Volume (vph)	51	6	13	62	89	11	48	5	86	1230	17	60
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.89	0.89	0.89	0.89	0.97	0.97	0.97	0.97
Adj. Flow (vph)	59	7	15	71	100	12	54	6	89	1268	18	62
RTOR Reduction (vph)	0	0	33	0	0	3	0	0	0	0	0	24
Lane Group Flow (vph)	0	0	119	0	100	69	0	0	89	1286	0	38
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Actuated Green, G (s)			13.3		13.3	13.3			52.7	52.7		61.0
Effective Green, g (s)			13.3		13.3	13.3			52.7	52.7		61.0
Actuated g/C Ratio			0.13		0.13	0.13			0.53	0.53		0.61
Clearance Time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)			3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)			192		133	217			155	2675		966
v/s Ratio Prot						0.04				0.25		
v/s Ratio Perm			0.08		c0.10				c0.30			0.02
v/c Ratio			0.62		0.75	0.32			0.57	0.48		0.04
Uniform Delay, d1			41.0		41.8	39.2			16.0	15.0		7.8
Progression Factor			1.00		1.00	1.00			0.73	0.58		0.55
Incremental Delay, d2			6.1		21.0	0.8			13.1	0.6		0.1
Delay (s)			47.0		62.8	40.1			24.8	9.2		4.4
Level of Service			D		E	D			C	A		A
Approach Delay (s)			47.0			53.3				10.0		
Approach LOS			D			D				A		

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

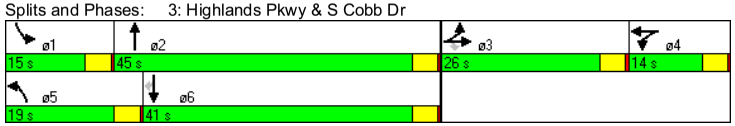
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5085	1583		1770	1583	
Flt Permitted		0.14	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		267	5085	1583		1770	1583	
Volume (vph)	9	36	1363	43	3	60	4	11
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93
Adj. Flow (vph)	10	38	1450	46	3	65	4	12
RTOR Reduction (vph)	0	0	0	22	0	0	10	0
Lane Group Flow (vph)	0	48	1450	24	0	68	6	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Actuated Green, G (s)		61.0	61.0	52.7		13.7	13.7	
Effective Green, g (s)		61.0	61.0	52.7		13.7	13.7	
Actuated g/C Ratio		0.61	0.61	0.53		0.14	0.14	
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		227	3102	834		242	217	
v/s Ratio Prot		0.01	c0.29					
v/s Ratio Perm		0.12		0.02		0.04	0.00	
v/c Ratio		0.21	0.47	0.03		0.28	0.03	
Uniform Delay, d1		9.4	10.6	11.4		38.7	37.4	
Progression Factor		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.5	0.1		2.9	0.2	
Delay (s)		9.9	11.1	11.4		41.6	37.6	
Level of Service		A	B	B		D	D	
Approach Delay (s)			11.1			40.8		
Approach LOS			B			D		

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1697	1583	0	1780	0	3433	5045	0	1770	5085	1583
Flt Permitted	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (perm)	1681	1697	1583	0	1780	0	3433	5045	0	1770	5085	1583
Satd. Flow (RTOR)			269		6			10				114
Volume (vph)	234	14	258	59	29	14	255	1141	55	24	1265	260
Lane Group Flow (vph)	135	142	269	0	124	0	277	1240	0	32	1291	277
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Total Split (s)	26.0	26.0	26.0	14.0	14.0	0.0	19.0	45.0	0.0	15.0	41.0	41.0
Act Effct Green (s)	13.6	13.6	13.6		11.5		12.6	55.7		7.1	46.3	46.3
Actuated g/C Ratio	0.14	0.14	0.14		0.12		0.13	0.56		0.07	0.46	0.46
v/c Ratio	0.59	0.61	0.60		0.59		0.64	0.44		0.25	0.55	0.35
Control Delay	50.3	51.5	10.6		51.3		39.0	23.9		52.0	16.7	8.6
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	50.3	51.5	10.6		51.3		39.0	23.9		52.0	16.7	8.6
LOS	D	D	B		D		D	C		D	B	A
Approach Delay		31.1			51.3			26.6			16.0	
Approach LOS		C			D			C			B	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 69 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



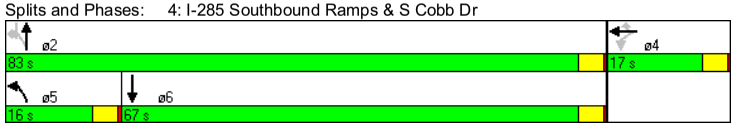
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		0.97	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1697	1583		1779		3433	5046		1770	5085	1583
Flt Permitted	0.95	0.96	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1697	1583		1779		3433	5046		1770	5085	1583
Volume (vph)	234	14	258	59	29	14	255	1141	55	24	1265	260
Peak-hour factor, PHF	0.91	0.70	0.96	0.82	0.81	0.88	0.92	0.97	0.86	0.75	0.98	0.94
Adj. Flow (vph)	257	20	269	72	36	16	277	1176	64	32	1291	277
RTOR Reduction (vph)	0	0	232	0	5	0	0	5	0	0	0	61
Lane Group Flow (vph)	135	142	37	0	119	0	277	1235	0	32	1291	216
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	13.6	13.6	13.6		11.5		12.6	54.1		4.8	46.3	46.3
Effective Green, g (s)	13.6	13.6	13.6		11.5		12.6	54.1		4.8	46.3	46.3
Actuated g/C Ratio	0.14	0.14	0.14		0.12		0.13	0.54		0.05	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	229	231	215		205		433	2730		85	2354	733
v/s Ratio Prot	0.08	c0.08			c0.07		c0.08	0.24		0.02	c0.25	
v/s Ratio Perm			0.02									0.14
v/c Ratio	0.59	0.61	0.17		0.58		0.64	0.45		0.38	0.55	0.29
Uniform Delay, d1	40.6	40.7	38.2		42.0		41.5	13.9		46.1	19.3	16.7
Progression Factor	1.00	1.00	1.00		1.00		0.82	1.55		1.10	0.75	0.63
Incremental Delay, d2	3.8	4.8	0.4		3.9		2.2	0.4		2.5	0.8	0.9
Delay (s)	44.4	45.5	38.6		45.9		36.4	22.0		53.1	15.4	11.4
Level of Service	D	D	D		D		D	C		D	B	B
Approach Delay (s)		41.8			45.9			24.6			15.5	
Approach LOS		D			D			C			B	

Intersection Summary					
HCM Average Control Delay	23.9	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.58				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0		
Intersection Capacity Utilization	56.1%	ICU Level of Service	B		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1459	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950	0.995		0.202					
Satd. Flow (perm)	0	0	0	1681	1459	1504	376	3539	0	0	3539	1583
Satd. Flow (RTOR)					185	185						661
Volume (vph)	0	0	0	237	0	742	59	1015	0	0	1031	628
Lane Group Flow (vph)	0	0	0	250	444	414	72	1068	0	0	1063	661
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	17.0	17.0	17.0	16.0	83.0	0.0	0.0	67.0	83.0
Act Effct Green (s)				13.0	13.0	13.0	79.0	79.0			71.0	79.0
Actuated g/C Ratio				0.13	0.13	0.13	0.79	0.79			0.71	0.79
v/c Ratio				1.14	1.26	1.16	0.19	0.38			0.42	0.48
Control Delay				145.1	163.2	123.1	1.8	2.2			4.4	4.2
Queue Delay				32.1	23.1	0.0	0.0	0.2			0.0	0.0
Total Delay				177.2	186.3	123.1	1.8	2.5			4.4	4.2
LOS				F	F	F	A	A			A	A
Approach Delay					160.6			2.4			4.3	
Approach LOS					F			A			A	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay: 47.4		Intersection LOS: D	
Intersection Capacity Utilization 93.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



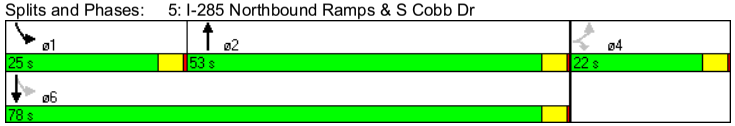
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.86	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1458	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.22	1.00			1.00	1.00
Satd. Flow (perm)				1681	1458	1504	411	3539			3539	1583
Volume (vph)	0	0	0	237	0	742	59	1015	0	0	1031	628
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.92	0.91	0.82	0.95	0.92	0.92	0.97	0.95
Adj. Flow (vph)	0	0	0	293	0	815	72	1068	0	0	1063	661
RTOR Reduction (vph)	0	0	0	0	161	161	0	0	0	0	0	139
Lane Group Flow (vph)	0	0	0	250	283	253	72	1068	0	0	1063	522
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				13.0	13.0	13.0	79.0	79.0			70.2	79.0
Effective Green, g (s)				13.0	13.0	13.0	79.0	79.0			70.2	79.0
Actuated g/C Ratio				0.13	0.13	0.13	0.79	0.79			0.70	0.79
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				219	190	196	390	2796			2484	1251
v/s Ratio Prot							0.01	0.30			0.30	
v/s Ratio Perm				0.15	0.19	0.17	0.14					c0.33
v/c Ratio				1.14	1.49	1.29	0.18	0.38			0.43	0.42
Uniform Delay, d1				43.5	43.5	43.5	3.4	3.2			6.3	3.3
Progression Factor				1.00	1.00	1.00	0.63	0.66			0.60	13.99
Incremental Delay, d2				104.2	246.2	163.6	0.1	0.1			0.5	0.9
Delay (s)				147.7	289.7	207.1	2.2	2.2			4.3	46.9
Level of Service				F	F	F	A	A			A	D
Approach Delay (s)		0.0			226.8			2.2			20.6	
Approach LOS		A			F			A			C	

Intersection Summary					
HCM Average Control Delay	72.9	HCM Level of Service		E	
HCM Volume to Capacity ratio	0.57				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	93.3%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3302	0	1770	3539	0
Flt Permitted	0.950									0.293		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3302	0	546	3539	0
Satd. Flow (RTOR)			60					282				
Volume (vph)	705	0	53	0	0	0	0	359	280	800	517	0
Lane Group Flow (vph)	766	0	60	0	0	0	0	694	0	833	550	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Total Split (s)	22.0	0.0	22.0	0.0	0.0	0.0	0.0	53.0	0.0	25.0	78.0	0.0
Act Effct Green (s)	18.0		18.0					49.0		74.0	74.0	
Actuated g/C Ratio	0.18		0.18					0.49		0.74	0.74	
v/c Ratio	1.24		0.18					0.39		1.26	0.21	
Control Delay	157.4		10.9					9.8		144.1	2.8	
Queue Delay	0.0		0.0					0.0		69.6	0.0	
Total Delay	157.4		10.9					9.8		213.7	2.8	
LOS	F		B					A		F	A	
Approach Delay								9.8			129.8	
Approach LOS								A			F	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 22 (22%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay: 105.9		Intersection LOS: F	
Intersection Capacity Utilization 93.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00					0.95		1.00	0.95	
Frt	1.00		0.85					0.93		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433		1583					3304		1770	3539	
Flt Permitted	0.95		1.00					1.00		0.29	1.00	
Satd. Flow (perm)	3433		1583					3304		545	3539	
Volume (vph)	705	0	53	0	0	0	0	359	280	800	517	0
Peak-hour factor, PHF	0.92	0.92	0.88	0.92	0.92	0.92	0.92	0.93	0.91	0.96	0.94	0.92
Adj. Flow (vph)	766	0	60	0	0	0	0	386	308	833	550	0
RTOR Reduction (vph)	0	0	49	0	0	0	0	144	0	0	0	0
Lane Group Flow (vph)	766	0	11	0	0	0	0	550	0	833	550	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	18.0		18.0					49.0		74.0	74.0	
Effective Green, g (s)	18.0		18.0					49.0		74.0	74.0	
Actuated g/C Ratio	0.18		0.18					0.49		0.74	0.74	
Clearance Time (s)	4.0		4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	618		285					1619		661	2619	
v/s Ratio Prot								0.17		c0.26	0.16	
v/s Ratio Perm	c0.22		0.01							c0.67		
v/c Ratio	1.24		0.04					0.34		1.26	0.21	
Uniform Delay, d1	41.0		33.9					15.6		14.8	4.0	
Progression Factor	1.00		1.00					1.00		0.93	0.65	
Incremental Delay, d2	121.2		0.1					0.6		127.1	0.2	
Delay (s)	162.2		33.9					16.2		140.9	2.8	
Level of Service	F		C					B		F	A	
Approach Delay (s)		152.9			0.0			16.2			85.9	
Approach LOS		F			A			B			F	

Intersection Summary					
HCM Average Control Delay	88.3	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.24				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	93.3%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1818	0	0	1781	0	0	1736	0	0	1693	0
Flt Permitted		0.981									0.977	
Satd. Flow (perm)	0	1818	0	0	1781	0	0	1736	0	0	1693	0
Volume (vph)	29	61	1	0	63	35	0	1	1	38	0	41
Lane Group Flow (vph)	0	113	0	0	124	0	0	8	0	0	100	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	29	61	1	0	63	35	0	1	1	38	0	41
Peak Hour Factor	0.66	0.94	0.25	0.92	0.75	0.88	0.92	0.25	0.25	0.79	0.92	0.79
Hourly flow rate (vph)	44	65	4	0	84	40	0	4	4	48	0	52
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	84			69			311	239	67	265	261	104
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	84			69			311	239	67	265	261	104
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	99	100	93	100	95
cM capacity (veh/h)	1513			1532			593	643	997	667	625	951

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	113	124	8	100
Volume Left	44	0	0	48
Volume Right	4	40	4	52
cSH	1513	1532	782	789
Volume to Capacity	0.03	0.00	0.01	0.13
Queue Length 95th (ft)	2	0	1	11
Control Delay (s)	3.0	0.0	9.7	10.2
Lane LOS	A		A	B
Approach Delay (s)	3.0	0.0	9.7	10.2
Approach LOS			A	B

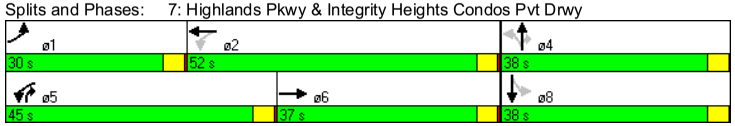
Intersection Summary				
Average Delay		4.2		
Intersection Capacity Utilization	29.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3433	0	1770	3529	0	1770	1863	1583	0	1863	0
Flt Permitted	0.950			0.478			0.755					
Satd. Flow (perm)	1770	3433	0	890	3529	0	1406	1863	1583	0	1863	0
Satd. Flow (RTOR)		26			2				304			
Volume (vph)	1	197	41	293	187	1	35	1	286	0	2	0
Lane Group Flow (vph)	4	259	0	305	212	0	44	1	304	0	4	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Total Split (s)	30.0	37.0	0.0	45.0	52.0	0.0	38.0	38.0	45.0	38.0	38.0	0.0
Act Effct Green (s)	5.8	30.9		51.7	51.0		7.5	7.5	26.7		7.4	
Actuated g/C Ratio	0.08	0.48		0.84	0.83		0.11	0.11	0.43		0.11	
v/c Ratio	0.03	0.15		0.30	0.07		0.27	0.00	0.35		0.02	
Control Delay	33.0	8.1		2.8	3.0		31.9	27.0	3.5		27.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	33.0	8.1		2.8	3.0		31.9	27.0	3.5		27.0	
LOS	C	A		A	A		C	C	A		C	
Approach Delay		8.5			2.9			7.2			27.0	
Approach LOS		A			A			A			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 61.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.35
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 41.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Highlands Pkwy & Integrity Heights Condos Pvt Drwy



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3433		1770	3529		1770	1863	1583		1863	
Flt Permitted	0.95	1.00		0.52	1.00		0.83	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3433		977	3529		1552	1863	1583		1863	
Volume (vph)	1	197	41	293	187	1	35	1	286	0	2	0
Peak-hour factor, PHF	0.25	0.95	0.79	0.96	0.90	0.25	0.80	0.92	0.94	0.92	0.50	0.92
Adj. Flow (vph)	4	207	52	305	208	4	44	1	304	0	4	0
RTOR Reduction (vph)	0	14	0	0	1	0	0	0	197	0	0	0
Lane Group Flow (vph)	4	245	0	305	211	0	44	1	107	0	4	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Actuated Green, G (s)	1.0	31.3		54.1	49.1		4.8	4.8	23.6		4.8	
Effective Green, g (s)	1.0	31.3		54.1	49.1		4.8	4.8	23.6		4.8	
Actuated g/C Ratio	0.01	0.47		0.81	0.73		0.07	0.07	0.35		0.07	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	26	1606		1013	2590		111	134	653		134	
v/s Ratio Prot	0.00	0.07		c0.08	0.06			0.00	c0.05		0.00	
v/s Ratio Perm				c0.16			c0.03		0.02			
v/c Ratio	0.15	0.15		0.30	0.08		0.40	0.01	0.16		0.03	
Uniform Delay, d1	32.5	10.2		1.6	2.5		29.7	28.8	14.9		28.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.7	0.0		0.2	0.1		2.3	0.0	0.1		0.1	
Delay (s)	35.3	10.2		1.8	2.6		32.0	28.9	15.0		29.0	
Level of Service	D	B		A	A		C	C	B		C	
Approach Delay (s)		10.6			2.1			17.2			29.0	
Approach LOS		B			A			B			C	

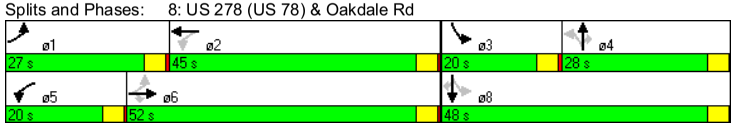
Intersection Summary

HCM Average Control Delay	8.8	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.29			
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	4.0	
Intersection Capacity Utilization	41.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3497	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.201			0.315			0.695			0.537		
Satd. Flow (perm)	374	3539	1583	587	3497	0	1295	1863	1583	1000	1863	1583
Satd. Flow (RTOR)			68		8				56			189
Volume (vph)	139	629	61	69	605	49	59	92	53	49	74	170
Lane Group Flow (vph)	156	699	72	80	721	0	76	108	56	60	96	189
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Total Split (s)	27.0	52.0	52.0	20.0	45.0	0.0	28.0	28.0	28.0	20.0	48.0	48.0
Act Effct Green (s)	58.3	51.5	51.5	55.8	50.4		10.6	10.6	10.6	20.4	20.2	20.2
Actuated g/C Ratio	0.64	0.58	0.58	0.62	0.57		0.12	0.12	0.12	0.22	0.23	0.23
v/c Ratio	0.42	0.34	0.08	0.18	0.36		0.49	0.49	0.24	0.21	0.23	0.37
Control Delay	10.2	12.8	4.1	7.7	13.8		49.0	45.0	12.9	27.5	27.7	6.3
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	10.2	12.8	4.1	7.7	13.8		49.0	45.0	12.9	27.5	27.7	6.3
LOS	B	B	A	A	B		D	D	B	C	C	A
Approach Delay		11.7			13.2			38.7			16.0	
Approach LOS		B			B			D			B	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 88.8			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: US 278 (US 78) & Oakdale Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3498		1770	1863	1583	1770	1863	1583
Flt Permitted	0.32	1.00	1.00	0.35	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	595	3539	1583	650	3498		1294	1863	1583	833	1863	1583
Volume (vph)	139	629	61	69	605	49	59	92	53	49	74	170
Peak-hour factor, PHF	0.89	0.90	0.85	0.86	0.91	0.88	0.78	0.85	0.95	0.82	0.77	0.90
Adj. Flow (vph)	156	699	72	80	665	56	76	108	56	60	96	189
RTOR Reduction (vph)	0	0	29	0	4	0	0	0	49	0	0	145
Lane Group Flow (vph)	156	699	43	80	717	0	76	108	7	60	96	44
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)	58.7	51.6	51.6	56.3	50.4		10.6	10.6	10.6	21.1	21.1	21.1
Effective Green, g (s)	58.7	51.6	51.6	56.3	50.4		10.6	10.6	10.6	21.1	21.1	21.1
Actuated g/C Ratio	0.65	0.57	0.57	0.62	0.56		0.12	0.12	0.12	0.23	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	478	2016	902	477	1946		151	218	185	261	434	369
v/s Ratio Prot	c0.03	0.20		0.01	c0.21			0.06		0.02	c0.05	
v/s Ratio Perm	0.19		0.03	0.09			c0.06		0.00	0.04		0.03
v/c Ratio	0.33	0.35	0.05	0.17	0.37		0.50	0.50	0.04	0.23	0.22	0.12
Uniform Delay, d1	6.6	10.5	8.6	6.9	11.2		37.5	37.5	35.5	27.7	28.1	27.4
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	0.4	0.5	0.1	0.2	0.5		2.6	1.8	0.1	0.5	0.3	0.1
Delay (s)	7.0	10.9	8.7	7.1	11.8		40.2	39.3	35.5	28.2	28.4	27.6
Level of Service	A	B	A	A	B		D	D	D	C	C	C
Approach Delay (s)		10.1			11.3			38.7			27.9	
Approach LOS		B			B			D			C	

Intersection Summary					
HCM Average Control Delay	16.1	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.38				
Actuated Cycle Length (s)	90.6	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	45.9%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1625	0	0	0	1611	1770	5085	1583	0	5080	0
Flt Permitted		0.996					0.950					
Satd. Flow (perm)	0	1625	0	0	0	1611	1770	5085	1583	0	5080	0
Volume (vph)	15	0	208	0	0	48	215	1465	46	0	1607	12
Lane Group Flow (vph)	0	244	0	0	0	60	269	1542	56	0	1690	0
Sign Control		Stop			Yield			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection has too many lanes per leg.
HCM All-Way analysis is limited to two lanes per leg.
Channelized right turn lanes are not counted.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1820	0	0	1857	0	0	1715	0	0	1611	0
Flt Permitted		0.999			0.997			0.970				
Satd. Flow (perm)	0	1820	0	0	1857	0	0	1715	0	0	1611	0
Volume (vph)	2	92	18	7	95	0	16	0	7	0	0	2
Lane Group Flow (vph)	0	147	0	0	128	0	0	32	0	0	4	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	92	18	7	95	0	16	0	7	0	0	2
Peak Hour Factor	0.50	0.77	0.75	0.88	0.79	0.92	0.80	0.92	0.58	0.92	0.92	0.50
Hourly flow rate (vph)	4	119	24	8	120	0	20	0	12	0	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	120			143			280	276	131	288	288	120
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	120			143			280	276	131	288	288	120
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	99	100	100	100
cM capacity (veh/h)	1467			1439			666	627	918	652	617	931

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	147	128	32	4
Volume Left	4	8	20	0
Volume Right	24	0	12	4
cSH	1467	1439	742	931
Volume to Capacity	0.00	0.01	0.04	0.00
Queue Length 95th (ft)	0	0	3	0
Control Delay (s)	0.2	0.5	10.1	8.9
Lane LOS	A	A	B	A
Approach Delay (s)	0.2	0.5	10.1	8.9
Approach LOS			B	A

Intersection Summary					
Average Delay	1.5				
Intersection Capacity Utilization	23.5%	ICU Level of Service		A	
Analysis Period (min)	15				

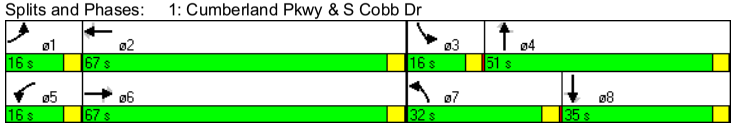
Base Intersection Analysis

Base 2009 PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			95			31			54			95
Volume (vph)	177	907	130	137	2033	129	569	1217	108	207	895	98
Lane Group Flow (vph)	203	945	153	152	2140	143	618	1352	132	233	923	124
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	16.0	67.0	35.0	16.0	67.0	51.0	32.0	51.0	67.0	16.0	35.0	67.0
Act Effct Green (s)	12.0	63.0	31.0	12.0	63.0	47.0	28.0	47.0	63.0	12.0	31.0	63.0
Actuated g/C Ratio	0.08	0.42	0.21	0.08	0.42	0.31	0.19	0.31	0.42	0.08	0.21	0.42
v/c Ratio	1.43	0.64	0.38	1.07	1.44	0.28	0.96	1.22	0.19	0.85	1.26	0.17
Control Delay	275.0	36.8	23.2	158.1	235.6	31.7	87.7	150.4	16.7	94.0	176.2	8.5
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	275.0	36.8	23.2	158.1	235.6	31.7	87.7	150.4	16.7	94.0	176.2	8.5
LOS	F	D	C	F	F	C	F	F	B	F	F	A
Approach Delay		72.4			218.8			123.6			145.0	
Approach LOS		E			F			F			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.44			
Intersection Signal Delay: 150.7		Intersection LOS: F	
Intersection Capacity Utilization 120.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



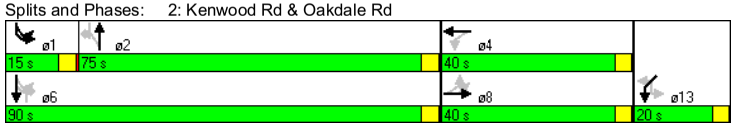
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	177	907	130	137	2033	129	569	1217	108	207	895	98
Peak-hour factor, PHF	0.87	0.96	0.85	0.90	0.95	0.90	0.92	0.90	0.82	0.89	0.97	0.79
Adj. Flow (vph)	203	945	153	152	2140	143	618	1352	132	233	923	124
RTOR Reduction (vph)	0	0	75	0	0	21	0	0	31	0	0	55
Lane Group Flow (vph)	203	945	78	152	2140	122	618	1352	101	233	923	69
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	63.0	31.0	12.0	63.0	47.0	28.0	47.0	63.0	12.0	31.0	63.0
Effective Green, g (s)	12.0	63.0	31.0	12.0	63.0	47.0	28.0	47.0	63.0	12.0	31.0	63.0
Actuated g/C Ratio	0.08	0.42	0.21	0.08	0.42	0.31	0.19	0.31	0.42	0.08	0.21	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	142	1486	327	142	1486	496	641	1109	665	275	731	665
v/s Ratio Prot	c0.11	0.27		0.09	c0.60		c0.18	c0.38		0.07	0.26	
v/s Ratio Perm			0.05			0.08			0.06			0.04
v/c Ratio	1.43	0.64	0.24	1.07	1.44	0.25	0.96	1.22	0.15	0.85	1.26	0.10
Uniform Delay, d1	69.0	34.4	49.6	69.0	43.5	38.3	60.5	51.5	26.9	68.1	59.5	26.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	228.9	2.1	0.4	95.6	201.9	0.3	26.6	106.9	0.5	20.8	129.0	0.3
Delay (s)	297.9	36.5	50.0	164.6	245.4	38.6	87.1	158.4	27.4	88.8	188.5	26.7
Level of Service	F	D	D	F	F	D	F	F	C	F	F	C
Approach Delay (s)		78.9			228.2			129.2			154.7	
Approach LOS		E			F			F			F	

Intersection Summary					
HCM Average Control Delay	158.5	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.33				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	120.3%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	1725	0	1770	1639	0	0	1770	5075	0	1583
Flt Permitted			0.686		0.607				0.213			
Satd. Flow (perm)	0	0	1206	0	1131	1639	0	0	397	5075	0	1583
Satd. Flow (RTOR)			23			1						48
Volume (vph)	37	3	19	42	367	40	151	6	101	1822	29	100
Lane Group Flow (vph)	0	0	134	0	378	203	0	0	102	1869	0	101
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Total Split (s)	40.0	40.0	40.0	0.0	40.0	40.0	0.0	0.0	75.0	75.0	0.0	90.0
Act Effct Green (s)			36.0		36.0	36.0			76.6	76.6		86.0
Actuated g/C Ratio			0.24		0.24	0.24			0.51	0.51		0.57
v/c Ratio			0.44		1.39	0.52			0.50	0.72		0.11
Control Delay			45.0		240.0	54.6			27.2	25.0		5.2
Queue Delay			0.0		0.0	0.0			0.0	6.2		0.0
Total Delay			45.0		240.0	54.6			27.2	31.2		5.2
LOS			D		F	D			C	C		A
Approach Delay			45.0			175.3				29.7		
Approach LOS			D			F				C		

Intersection Summary		
Cycle Length: 150		
Actuated Cycle Length: 150		
Offset: 140 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.39		
Intersection Signal Delay: 49.4	Intersection LOS: D	
Intersection Capacity Utilization 89.9%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 2: Kenwood Rd & Oakdale Rd



Lane Group	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	1770	5085	1583	0	1770	1583	0
Flt Permitted		0.053				0.950		
Satd. Flow (perm)	0	99	5085	1583	0	1770	1583	0
Satd. Flow (RTOR)				34			9	
Volume (vph)	2	48	1191	33	4	140	11	8
Lane Group Flow (vph)	0	51	1215	34	0	164	21	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Total Split (s)	15.0	15.0	90.0	75.0	20.0	20.0	20.0	0.0
Act Effct Green (s)		86.0	86.0	76.6		16.0	16.0	
Actuated g/C Ratio		0.57	0.57	0.51		0.11	0.11	
v/c Ratio		0.37	0.42	0.04		0.87	0.12	
Control Delay		21.6	18.5	6.1		103.5	42.9	
Queue Delay		0.0	0.0	0.0		0.0	0.0	
Total Delay		21.6	18.5	6.1		103.5	42.9	
LOS		C	B	A		F	D	
Approach Delay			18.3			96.7		
Approach LOS			B			F		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Lane Util. Factor			1.00		1.00	1.00			1.00	0.91		1.00
Frt			0.94		1.00	0.88			1.00	1.00		0.85
Flt Protected			0.98		0.95	1.00			0.95	1.00		1.00
Satd. Flow (prot)			1724		1770	1640			1770	5073		1583
Flt Permitted			0.69		0.61	1.00			0.20	1.00		1.00
Satd. Flow (perm)			1206		1131	1640			371	5073		1583
Volume (vph)	37	3	19	42	367	40	151	6	101	1822	29	100
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.97	0.97	0.97	0.97	0.99	0.99	0.99	0.99
Adj. Flow (vph)	49	4	25	56	378	41	156	6	102	1840	29	101
RTOR Reduction (vph)	0	0	17	0	0	1	0	0	0	0	0	20
Lane Group Flow (vph)	0	0	117	0	378	202	0	0	102	1869	0	81
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Actuated Green, G (s)			36.0		36.0	36.0			75.8	75.8		86.0
Effective Green, g (s)			36.0		36.0	36.0			75.8	75.8		86.0
Actuated g/C Ratio			0.24		0.24	0.24			0.51	0.51		0.57
Clearance Time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)			3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)			289		271	394			187	2564		908
v/s Ratio Prot						0.12				c0.37		
v/s Ratio Perm			0.10		c0.33				0.27			0.05
v/c Ratio			0.40		1.39	0.51			0.55	0.73		0.09
Uniform Delay, d1			48.0		57.0	49.4			25.3	29.1		14.4
Progression Factor			1.00		1.00	1.00			0.75	0.81		0.64
Incremental Delay, d2			0.9		198.7	1.1			8.0	1.3		0.1
Delay (s)			48.9		255.7	50.5			27.1	24.9		9.3
Level of Service			D		F	D			C	C		A
Approach Delay (s)			48.9			184.0				24.3		
Approach LOS			D			F				C		

Intersection Summary			
HCM Average Control Delay	48.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

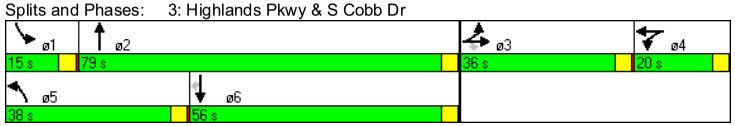
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5085	1583		1770	1583	
Flt Permitted		0.05	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		93	5085	1583		1770	1583	
Volume (vph)	2	48	1191	33	4	140	11	8
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.88	0.88	0.88	0.88
Adj. Flow (vph)	2	49	1215	34	5	159	12	9
RTOR Reduction (vph)	0	0	0	17	0	0	8	0
Lane Group Flow (vph)	0	51	1215	17	0	164	13	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Actuated Green, G (s)		86.0	86.0	75.8		16.0	16.0	
Effective Green, g (s)		86.0	86.0	75.8		16.0	16.0	
Actuated g/C Ratio		0.57	0.57	0.51		0.11	0.11	
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		123	2915	800		189	169	
v/s Ratio Prot		0.02	c0.24					
v/s Ratio Perm		0.22		0.01		0.09	0.01	
v/c Ratio		0.41	0.42	0.02		0.87	0.08	
Uniform Delay, d1		23.1	17.9	18.6		66.0	60.3	
Progression Factor		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.3	0.4	0.0		38.1	0.9	
Delay (s)		25.4	18.4	18.6		104.1	61.2	
Level of Service		C	B	B		F	E	
Approach Delay (s)			18.7			99.2		
Approach LOS			B			F		

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1692	1583	0	1763	0	3433	5070	0	1770	5085	1583
Flt Permitted	0.950	0.956			0.981		0.950			0.950		
Satd. Flow (perm)	1681	1692	1583	0	1763	0	3433	5070	0	1770	5085	1583
Satd. Flow (RTOR)			429		10			3				180
Volume (vph)	634	20	497	51	41	29	484	1435	24	27	1061	525
Lane Group Flow (vph)	342	361	529	0	149	0	520	1508	0	35	1094	577
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Total Split (s)	36.0	36.0	36.0	20.0	20.0	0.0	38.0	79.0	0.0	15.0	56.0	56.0
Act Effct Green (s)	32.0	32.0	32.0		14.9		27.1	80.8		8.3	60.0	60.0
Actuated g/C Ratio	0.21	0.21	0.21		0.10		0.18	0.54		0.06	0.40	0.40
v/c Ratio	0.95	1.00	0.78		0.81		0.84	0.55		0.36	0.54	0.78
Control Delay	94.7	105.4	20.2		92.2		60.5	24.9		80.1	24.5	21.5
Queue Delay	0.0	0.0	0.0		0.2		0.0	0.4		0.0	0.3	0.7
Total Delay	94.7	105.4	20.2		92.4		60.5	25.3		80.1	24.8	22.2
LOS	F	F	C		F		E	C		F	C	C
Approach Delay		65.8			92.4			34.3			25.0	
Approach LOS		E			F			C			C	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 115 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 40.5		Intersection LOS: D	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		0.97	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		0.96		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1692	1583		1762		3433	5071		1770	5085	1583
Flt Permitted	0.95	0.96	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1692	1583		1762		3433	5071		1770	5085	1583
Volume (vph)	634	20	497	51	41	29	484	1435	24	27	1061	525
Peak-hour factor, PHF	0.94	0.68	0.94	0.86	0.81	0.75	0.93	0.97	0.82	0.78	0.97	0.91
Adj. Flow (vph)	674	29	529	59	51	39	520	1479	29	35	1094	577
RTOR Reduction (vph)	0	0	337	0	9	0	0	1	0	0	0	108
Lane Group Flow (vph)	342	361	192	0	140	0	520	1507	0	35	1094	469
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	32.0	32.0	32.0		14.9		27.1	79.9		7.2	60.0	60.0
Effective Green, g (s)	32.0	32.0	32.0		14.9		27.1	79.9		7.2	60.0	60.0
Actuated g/C Ratio	0.21	0.21	0.21		0.10		0.18	0.53		0.05	0.40	0.40
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	359	361	338		175		620	2701		85	2034	633
v/s Ratio Prot	0.20	c0.21			c0.08		c0.15	0.30		0.02	0.22	
v/s Ratio Perm			0.12									c0.30
v/c Ratio	0.95	1.00	0.57		0.80		0.84	0.56		0.41	0.54	0.74
Uniform Delay, d1	58.3	59.0	52.8		66.1		59.3	23.3		69.3	34.4	38.4
Progression Factor	1.00	1.00	1.00		1.00		0.89	1.03		1.07	0.67	0.54
Incremental Delay, d2	35.1	47.4	2.2		22.0		5.9	0.5		2.4	0.8	5.8
Delay (s)	93.3	106.4	55.0		88.1		58.9	24.5		76.8	23.8	26.4
Level of Service	F	F	D		F		E	C		E	C	C
Approach Delay (s)		80.7			88.1			33.3			25.7	
Approach LOS		F			F			C			C	

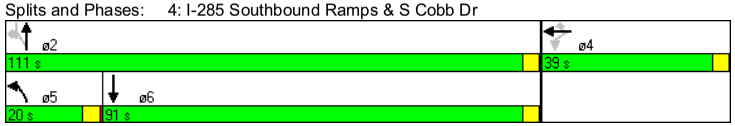
Intersection Summary					
HCM Average Control Delay	43.8	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	69.1%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1441	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950			0.189					
Satd. Flow (perm)	0	0	0	1681	1441	1504	352	3539	0	0	3539	1583
Satd. Flow (RTOR)					92	92						832
Volume (vph)	0	0	0	436	0	980	71	1288	0	0	998	774
Lane Group Flow (vph)	0	0	0	458	545	545	85	1328	0	0	1051	832
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	39.0	39.0	39.0	20.0	111.0	0.0	0.0	91.0	111.0
Act Effct Green (s)				35.0	35.0	35.0	107.0	107.0			97.5	107.0
Actuated g/C Ratio				0.23	0.23	0.23	0.71	0.71			0.65	0.71
v/c Ratio				1.17	1.34	1.29	0.28	0.53			0.46	0.61
Control Delay				149.1	204.5	186.5	1.4	1.6			6.1	5.7
Queue Delay				14.4	15.0	0.0	0.0	0.5			0.0	0.0
Total Delay				163.5	219.5	186.5	1.4	2.1			6.1	5.7
LOS				F	F	F	A	A			A	A
Approach Delay					191.3			2.1			5.9	
Approach LOS					F			A			A	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 122 (81%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.34
Intersection Signal Delay: 64.0 Intersection LOS: E
Intersection Capacity Utilization 136.8% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.85	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1441	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.21	1.00			1.00	1.00
Satd. Flow (perm)				1681	1441	1504	391	3539			3539	1583
Volume (vph)	0	0	0	436	0	980	71	1288	0	0	998	774
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.92	0.90	0.84	0.97	0.92	0.92	0.95	0.93
Adj. Flow (vph)	0	0	0	459	0	1089	85	1328	0	0	1051	832
RTOR Reduction (vph)	0	0	0	0	71	71	0	0	0	0	0	239
Lane Group Flow (vph)	0	0	0	458	474	474	85	1328	0	0	1051	593
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				35.0	35.0	35.0	107.0	107.0			97.5	107.0
Effective Green, g (s)				35.0	35.0	35.0	107.0	107.0			97.5	107.0
Actuated g/C Ratio				0.23	0.23	0.23	0.71	0.71			0.65	0.71
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				392	336	351	329	2524			2300	1129
v/s Ratio Prot							0.01	c0.38			0.30	
v/s Ratio Perm				0.27	0.33	0.32	0.17					0.37
v/c Ratio				1.17	1.41	1.35	0.26	0.53			0.46	0.53
Uniform Delay, d1				57.5	57.5	57.5	8.6	9.9			13.1	9.9
Progression Factor				1.00	1.00	1.00	0.13	0.14			0.42	8.27
Incremental Delay, d2				99.9	202.3	176.0	0.1	0.2			0.6	1.5
Delay (s)				157.4	259.8	233.5	1.2	1.6			6.0	83.0
Level of Service				F	F	F	A	A			A	F
Approach Delay (s)		0.0			220.2			1.6			40.1	
Approach LOS		A			F			A			D	

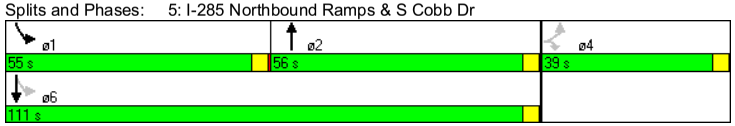
Intersection Summary

HCM Average Control Delay	86.4	HCM Level of Service		F	
HCM Volume to Capacity ratio	0.74				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	136.8%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3330	0	1770	3539	0
Flt Permitted	0.950									0.147		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3330	0	274	3539	0
Satd. Flow (RTOR)			87					113				
Volume (vph)	910	0	80	0	0	0	0	469	281	744	658	0
Lane Group Flow (vph)	929	0	94	0	0	0	0	835	0	791	708	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Total Split (s)	39.0	0.0	39.0	0.0	0.0	0.0	0.0	56.0	0.0	55.0	111.0	0.0
Act Effct Green (s)	35.0		35.0					52.0		107.0	107.0	
Actuated g/C Ratio	0.23		0.23					0.35		0.71	0.71	
v/c Ratio	1.16		0.22					0.68		1.12	0.28	
Control Delay	135.3		11.5					39.1		104.6	8.6	
Queue Delay	0.0		0.0					0.0		104.2	0.4	
Total Delay	135.3		11.5					39.1		208.8	9.1	
LOS	F		B					D		F	A	
Approach Delay								39.1			114.5	
Approach LOS								D			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 101 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.16			
Intersection Signal Delay: 98.6		Intersection LOS: F	
Intersection Capacity Utilization 136.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00					0.95		1.00	0.95	
Frt	1.00		0.85					0.94		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433		1583					3329		1770	3539	
Flt Permitted	0.95		1.00					1.00		0.15	1.00	
Satd. Flow (perm)	3433		1583					3329		273	3539	
Volume (vph)	910	0	80	0	0	0	0	469	281	744	658	0
Peak-hour factor, PHF	0.98	0.92	0.85	0.92	0.92	0.92	0.92	0.93	0.85	0.94	0.93	0.92
Adj. Flow (vph)	929	0	94	0	0	0	0	504	331	791	708	0
RTOR Reduction (vph)	0	0	67	0	0	0	0	74	0	0	0	0
Lane Group Flow (vph)	929	0	27	0	0	0	0	761	0	791	708	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	35.0		35.0					52.0		107.0	107.0	
Effective Green, g (s)	35.0		35.0					52.0		107.0	107.0	
Actuated g/C Ratio	0.23		0.23					0.35		0.71	0.71	
Clearance Time (s)	4.0		4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	801		369					1154		704	2524	
v/s Ratio Prot								0.23		c0.38	0.20	
v/s Ratio Perm	c0.27		0.02							c0.42		
v/c Ratio	1.16		0.07					0.66		1.12	0.28	
Uniform Delay, d1	57.5		44.9					41.5		37.8	7.7	
Progression Factor	1.00		1.00					1.00		1.06	1.09	
Incremental Delay, d2	85.6		0.1					3.0		69.3	0.2	
Delay (s)	143.1		44.9					44.5		109.3	8.6	
Level of Service	F		D					D		F	A	
Approach Delay (s)		134.1			0.0			44.5			61.8	
Approach LOS		F			A			D			E	

Intersection Summary					
HCM Average Control Delay	79.5	HCM Level of Service		E	
HCM Volume to Capacity ratio	1.12				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	136.8%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1820	0	0	1837	0	0	1767	0	0	1679	0
Flt Permitted		0.980						0.983			0.981	
Satd. Flow (perm)	0	1820	0	0	1837	0	0	1767	0	0	1679	0
Volume (vph)	68	106	1	0	351	36	8	10	6	110	2	156
Lane Group Flow (vph)	0	199	0	0	419	0	0	46	0	0	314	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	68	106	1	0	351	36	8	10	6	110	2	156
Peak Hour Factor	0.84	0.93	0.25	0.92	0.93	0.85	0.50	0.56	0.50	0.90	0.50	0.83
Hourly flow rate (vph)	81	114	4	0	377	42	16	18	12	122	4	188
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	377			118			866	655	116	697	678	399
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	377			118			866	655	116	697	678	399
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			91	95	99	62	99	71
cM capacity (veh/h)	1181			1470			183	359	936	320	348	651

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	199	420	46	314
Volume Left	81	0	16	122
Volume Right	4	42	12	188
cSH	1181	1470	305	461
Volume to Capacity	0.07	0.00	0.15	0.68
Queue Length 95th (ft)	6	0	13	126
Control Delay (s)	3.7	0.0	18.9	28.0
Lane LOS	A		C	D
Approach Delay (s)	3.7	0.0	18.9	28.0
Approach LOS			C	D

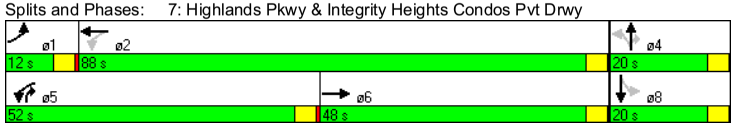
Intersection Summary				
Average Delay	10.6			
Intersection Capacity Utilization	62.5%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3412	0	1770	3511	0	1770	1863	1583	0	1789	0
Flt Permitted	0.950			0.083			0.714				0.873	
Satd. Flow (perm)	1770	3412	0	155	3511	0	1330	1863	1583	0	1599	0
Satd. Flow (RTOR)		40			11				49		5	
Volume (vph)	5	778	236	637	436	14	82	2	374	21	17	3
Lane Group Flow (vph)	8	1117	0	671	485	0	111	4	386	0	63	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Total Split (s)	12.0	48.0	0.0	52.0	88.0	0.0	20.0	20.0	52.0	20.0	20.0	0.0
Act Effct Green (s)	6.2	45.8		91.3	89.2		13.1	13.1	58.6		13.1	
Actuated g/C Ratio	0.05	0.41		0.81	0.79		0.12	0.12	0.52		0.12	
v/c Ratio	0.09	0.79		0.93	0.17		0.72	0.02	0.46		0.33	
Control Delay	58.2	35.0		47.9	3.5		73.8	45.5	15.7		48.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	58.2	35.0		47.9	3.5		73.8	45.5	15.7		48.3	
LOS	E	D		D	A		E	D	B		D	
Approach Delay		35.2			29.3			28.8			48.3	
Approach LOS		D			C			C			D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 112.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 83.2% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 7: Highlands Pkwy & Integrity Heights Condos Pvt Drwy



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3410		1770	3511		1770	1863	1583		1788	
Flt Permitted	0.95	1.00		0.10	1.00		0.71	1.00	1.00		0.87	
Satd. Flow (perm)	1770	3410		186	3511		1330	1863	1583		1585	
Volume (vph)	5	778	236	637	436	14	82	2	374	21	17	3
Peak-hour factor, PHF	0.62	0.92	0.87	0.95	0.95	0.54	0.74	0.50	0.97	0.71	0.67	0.38
Adj. Flow (vph)	8	846	271	671	459	26	111	4	386	30	25	8
RTOR Reduction (vph)	0	23	0	0	3	0	0	0	26	0	4	0
Lane Group Flow (vph)	8	1094	0	671	482	0	111	4	360	0	59	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Actuated Green, G (s)	1.4	49.1		94.6	89.2		13.1	13.1	54.6		13.1	
Effective Green, g (s)	1.4	49.1		94.6	89.2		13.1	13.1	54.6		13.1	
Actuated g/C Ratio	0.01	0.42		0.82	0.77		0.11	0.11	0.47		0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	21	1447		720	2707		151	211	802		179	
v/s Ratio Prot	0.00	0.32		c0.33	0.14			0.00	0.16			
v/s Ratio Perm				c0.43			c0.08		0.07		0.04	
v/c Ratio	0.38	0.76		0.93	0.18		0.74	0.02	0.45		0.33	
Uniform Delay, d1	56.7	28.2		29.1	3.5		49.6	45.6	20.5		47.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	11.2	2.3		18.8	0.1		16.9	0.0	0.4		1.1	
Delay (s)	67.9	30.5		47.9	3.7		66.5	45.6	20.9		48.3	
Level of Service	E	C		D	A		E	D	C		D	
Approach Delay (s)		30.8			29.4			31.2			48.3	
Approach LOS		C			C			C			D	

Intersection Summary

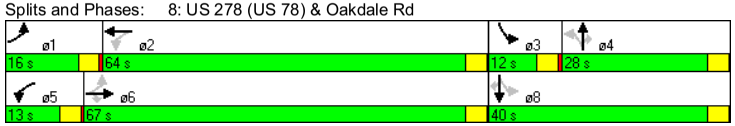
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	115.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3500	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.063			0.428			0.416			0.465		
Satd. Flow (perm)	117	3539	1583	797	3500	0	775	1863	1583	866	1863	1583
Satd. Flow (RTOR)			80		10				119			162
Volume (vph)	141	489	72	220	1319	103	80	133	100	103	339	448
Lane Group Flow (vph)	153	532	80	239	1548	0	94	145	119	123	368	477
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Total Split (s)	16.0	67.0	67.0	13.0	64.0	0.0	28.0	28.0	28.0	12.0	40.0	40.0
Act Effct Green (s)	73.1	63.2	63.2	70.9	62.1		18.0	18.0	18.0	29.8	29.8	29.8
Actuated g/C Ratio	0.64	0.55	0.55	0.62	0.55		0.16	0.16	0.16	0.26	0.26	0.26
v/c Ratio	0.70	0.27	0.09	0.42	0.81		0.77	0.49	0.34	0.43	0.75	0.89
Control Delay	39.9	14.5	3.3	11.0	26.8		82.6	49.2	10.0	37.6	48.9	46.4
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	39.9	14.5	3.3	11.0	26.8		82.6	49.2	10.0	37.6	48.9	46.4
LOS	D	B	A	B	C		F	D	B	D	D	D
Approach Delay		18.4			24.7			44.9			46.3	
Approach LOS		B			C			D			D	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 113.9			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 30.7		Intersection LOS: C	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 8: US 278 (US 78) & Oakdale Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3500		1770	1863	1583	1770	1863	1583
Flt Permitted	0.06	1.00	1.00	0.42	1.00		0.37	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)	118	3539	1583	788	3500		691	1863	1583	765	1863	1583
Volume (vph)	141	489	72	220	1319	103	80	133	100	103	339	448
Peak-hour factor, PHF	0.92	0.92	0.90	0.92	0.92	0.90	0.85	0.92	0.84	0.84	0.92	0.94
Adj. Flow (vph)	153	532	80	239	1434	114	94	145	119	123	368	477
RTOR Reduction (vph)	0	0	36	0	5	0	0	0	100	0	0	119
Lane Group Flow (vph)	153	532	44	239	1543	0	94	145	19	123	368	358
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)	73.1	63.2	63.2	70.9	62.1		18.0	18.0	18.0	29.9	29.9	29.9
Effective Green, g (s)	73.1	63.2	63.2	70.9	62.1		18.0	18.0	18.0	29.9	29.9	29.9
Actuated g/C Ratio	0.64	0.55	0.55	0.62	0.55		0.16	0.16	0.16	0.26	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	219	1964	878	566	1908		109	294	250	271	489	416
v/s Ratio Prot	c0.06	0.15		0.03	c0.44			0.08		0.03	0.20	
v/s Ratio Perm	0.39		0.03	0.23			0.14		0.01	0.09		c0.23
v/c Ratio	0.70	0.27	0.05	0.42	0.81		0.86	0.49	0.08	0.45	0.75	0.86
Uniform Delay, d1	26.3	13.3	11.6	9.5	21.1		46.7	43.8	40.9	33.6	38.6	40.0
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	9.3	0.3	0.1	0.5	3.8		46.1	1.3	0.1	1.2	6.5	16.0
Delay (s)	35.7	13.6	11.7	10.0	24.9		92.8	45.1	41.0	34.8	45.1	56.0
Level of Service	D	B	B	B	C		F	D	D	C	D	E
Approach Delay (s)		17.8			22.9			56.3			49.2	
Approach LOS		B			C			E			D	

Intersection Summary					
HCM Average Control Delay	31.5	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.81				
Actuated Cycle Length (s)	113.9	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	83.2%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1617	0	0	0	1611	1770	5085	1583	0	5060	0
Flt Permitted		0.998					0.950					
Satd. Flow (perm)	0	1617	0	0	0	1611	1770	5085	1583	0	5060	0
Volume (vph)	8	0	260	0	0	92	437	1789	121	0	1548	46
Lane Group Flow (vph)	0	298	0	0	0	110	465	1826	136	0	1684	0
Sign Control		Stop			Yield			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1814	0	0	1859	0	0	1731	0	0	1611	0
Flt Permitted					0.998			0.965				
Satd. Flow (perm)	0	1814	0	0	1859	0	0	1731	0	0	1611	0
Volume (vph)	0	144	21	15	543	0	15	0	7	0	0	3
Lane Group Flow (vph)	0	220	0	0	593	0	0	29	0	0	8	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 55.2%					ICU Level of Service B							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	144	21	15	543	0	15	0	7	0	0	3
Peak Hour Factor	0.92	0.81	0.50	0.70	0.95	0.92	0.70	0.92	0.88	0.92	0.92	0.38
Hourly flow rate (vph)	0	178	42	21	572	0	21	0	8	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	572			220			821	813	199	821	834	572
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	572			220			821	813	199	821	834	572
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			92	100	99	100	100	98
cM capacity (veh/h)	1001			1350			285	308	842	287	299	520

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	220	593	29	8
Volume Left	0	21	21	0
Volume Right	42	0	8	8
cSH	1001	1350	348	520
Volume to Capacity	0.00	0.02	0.08	0.02
Queue Length 95th (ft)	0	1	7	1
Control Delay (s)	0.0	0.5	16.3	12.0
Lane LOS		A	C	B
Approach Delay (s)	0.0	0.5	16.3	12.0
Approach LOS			C	B

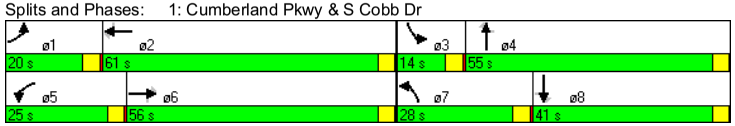
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			55.2%		ICU Level of Service				B			
Analysis Period (min)			15									

Base 2009 PM Improved

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			144			46			44			89
Volume (vph)	177	907	130	137	2033	129	569	1217	99	207	895	98
Lane Group Flow (vph)	203	945	153	152	2140	143	618	1352	121	233	923	124
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	20.0	56.0	41.0	25.0	61.0	55.0	28.0	55.0	56.0	14.0	41.0	61.0
Act Effct Green (s)	16.0	55.8	37.0	17.2	57.0	51.0	24.0	51.0	55.8	10.0	37.0	57.0
Actuated g/C Ratio	0.11	0.37	0.25	0.11	0.38	0.34	0.16	0.34	0.37	0.07	0.25	0.38
v/c Ratio	1.07	0.50	0.31	0.75	1.11	0.25	1.13	1.12	0.20	1.02	1.06	0.19
Control Delay	147.4	37.9	9.6	86.2	99.7	25.2	133.2	111.9	21.9	131.3	100.0	10.9
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	147.4	37.9	9.6	86.2	99.7	25.2	133.2	111.9	21.9	131.3	100.0	10.9
LOS	F	D	A	F	F	C	F	F	C	F	F	B
Approach Delay		51.7			94.5			113.0			97.0	
Approach LOS		D			F			F			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 92.6		Intersection LOS: F	
Intersection Capacity Utilization 103.4%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



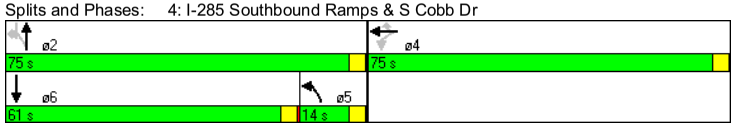
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	177	907	130	137	2033	129	569	1217	99	207	895	98
Peak-hour factor, PHF	0.87	0.96	0.85	0.90	0.95	0.90	0.92	0.90	0.82	0.89	0.97	0.79
Adj. Flow (vph)	203	945	153	152	2140	143	618	1352	121	233	923	124
RTOR Reduction (vph)	0	0	108	0	0	30	0	0	28	0	0	55
Lane Group Flow (vph)	203	945	45	152	2140	113	618	1352	93	233	923	69
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	16.0	55.8	37.0	17.2	57.0	51.0	24.0	51.0	55.8	10.0	37.0	57.0
Effective Green, g (s)	16.0	55.8	37.0	17.2	57.0	51.0	24.0	51.0	55.8	10.0	37.0	57.0
Actuated g/C Ratio	0.11	0.37	0.25	0.11	0.38	0.34	0.16	0.34	0.37	0.07	0.25	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	189	1892	390	203	1932	538	549	1203	589	229	873	602
v/s Ratio Prot	c0.11	0.19		0.09	c0.42		c0.18	c0.38		0.07	0.26	
v/s Ratio Perm			0.03			0.07			0.06			0.04
v/c Ratio	1.07	0.50	0.11	0.75	1.11	0.21	1.13	1.12	0.16	1.02	1.06	0.11
Uniform Delay, d1	67.0	36.3	43.8	64.3	46.5	35.2	63.0	49.5	31.4	70.0	56.5	30.1
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	86.5	0.9	0.1	14.0	56.6	0.2	77.9	67.0	0.6	64.0	46.8	0.4
Delay (s)	153.5	37.3	43.9	78.3	103.1	35.4	140.9	116.5	32.0	134.0	103.3	30.5
Level of Service	F	D	D	E	F	D	F	F	C	F	F	C
Approach Delay (s)		56.2			97.6			118.8			101.8	
Approach LOS		E			F			F			F	

Intersection Summary					
HCM Average Control Delay	97.0	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.07				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	103.4%	ICU Level of Service		G	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1441	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950			0.106					
Satd. Flow (perm)	0	0	0	1681	1441	1504	197	3539	0	0	3539	1583
Satd. Flow (RTOR)					24	24						754
Volume (vph)	0	0	0	436	0	980	71	1288	0	0	998	774
Lane Group Flow (vph)	0	0	0	459	544	545	85	1328	0	0	1051	832
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	75.0	75.0	75.0	14.0	75.0	0.0	0.0	61.0	75.0
Act Effct Green (s)				59.8	59.8	59.8	82.2	82.2			68.2	82.2
Actuated g/C Ratio				0.40	0.40	0.40	0.55	0.55			0.45	0.55
v/c Ratio				0.68	0.92	0.89	0.40	0.69			0.65	0.69
Control Delay				41.9	62.4	56.3	46.9	37.8			19.6	7.4
Queue Delay				0.6	0.0	0.0	0.0	1.0			0.0	0.0
Total Delay				42.4	62.4	56.3	46.9	38.8			19.6	7.4
LOS				D	E	E	D	D			B	A
Approach Delay					54.3			39.3			14.2	
Approach LOS					D			D			B	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 125 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 34.4		Intersection LOS: C	
Intersection Capacity Utilization 132.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



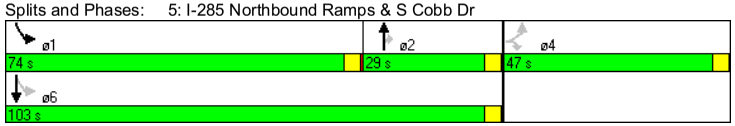
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.85	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1441	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.15	1.00			1.00	1.00
Satd. Flow (perm)				1681	1441	1504	280	3539			3539	1583
Volume (vph)	0	0	0	436	0	980	71	1288	0	0	998	774
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.92	0.90	0.84	0.97	0.92	0.92	0.95	0.93
Adj. Flow (vph)	0	0	0	459	0	1089	85	1328	0	0	1051	832
RTOR Reduction (vph)	0	0	0	0	14	14	0	0	0	0	0	341
Lane Group Flow (vph)	0	0	0	459	530	531	85	1328	0	0	1051	491
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				59.8	59.8	59.8	82.2	82.2			68.2	82.2
Effective Green, g (s)				59.8	59.8	59.8	82.2	82.2			68.2	82.2
Actuated g/C Ratio				0.40	0.40	0.40	0.55	0.55			0.45	0.55
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				670	574	600	253	1939			1609	867
v/s Ratio Prot							0.02	c0.38			0.30	
v/s Ratio Perm				0.27	0.37	0.35	0.16					0.31
v/c Ratio				0.69	0.92	0.88	0.34	0.68			0.65	0.57
Uniform Delay, d1				37.3	42.9	41.9	40.1	24.5			31.7	22.2
Progression Factor				1.00	1.00	1.00	1.24	1.39			0.52	1.47
Incremental Delay, d2				2.9	20.5	14.5	0.3	0.8			1.8	2.3
Delay (s)				40.2	63.4	56.4	49.9	34.8			18.4	35.0
Level of Service				D	E	E	D	C			B	D
Approach Delay (s)		0.0			54.1			35.7			25.8	
Approach LOS		A			D			D			C	

Intersection Summary					
HCM Average Control Delay	37.7	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.78				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	132.2%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.138		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	257	3539	0
Satd. Flow (RTOR)			94						252			
Volume (vph)	910	0	80	0	0	0	0	469	281	744	658	0
Lane Group Flow (vph)	929	0	94	0	0	0	0	504	331	791	708	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Total Split (s)	47.0	0.0	47.0	0.0	0.0	0.0	0.0	29.0	29.0	74.0	103.0	0.0
Act Effct Green (s)	42.3		42.3					25.0	25.0	99.7	99.7	
Actuated g/C Ratio	0.28		0.28					0.17	0.17	0.66	0.66	
v/c Ratio	0.96		0.18					0.85	0.70	0.89	0.30	
Control Delay	73.5		8.0					75.4	23.4	41.3	5.8	
Queue Delay	1.0		0.0					0.0	0.0	15.4	0.3	
Total Delay	74.5		8.0					75.4	23.4	56.7	6.1	
LOS	E		A					E	C	E	A	
Approach Delay								54.8			32.8	
Approach LOS								D			C	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 3 (2%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 49.1		Intersection LOS: D	
Intersection Capacity Utilization 132.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97		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)	3433		1583					3539	1583	1770	3539	
Flt Permitted	0.95		1.00					1.00	1.00	0.14	1.00	
Satd. Flow (perm)	3433		1583					3539	1583	257	3539	
Volume (vph)	910	0	80	0	0	0	0	469	281	744	658	0
Peak-hour factor, PHF	0.98	0.92	0.85	0.92	0.92	0.92	0.92	0.93	0.85	0.94	0.93	0.92
Adj. Flow (vph)	929	0	94	0	0	0	0	504	331	791	708	0
RTOR Reduction (vph)	0	0	67	0	0	0	0	0	210	0	0	0
Lane Group Flow (vph)	929	0	27	0	0	0	0	504	121	791	708	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Actuated Green, G (s)	42.3		42.3					25.0	25.0	99.7	99.7	
Effective Green, g (s)	42.3		42.3					25.0	25.0	99.7	99.7	
Actuated g/C Ratio	0.28		0.28					0.17	0.17	0.66	0.66	
Clearance Time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	968		446					590	264	884	2352	
v/s Ratio Prot								0.14		c0.42	0.20	
v/s Ratio Perm	c0.27		0.02						0.08	c0.17		
v/c Ratio	0.96		0.06					0.85	0.46	0.89	0.30	
Uniform Delay, d1	53.0		39.3					60.7	56.4	30.7	10.5	
Progression Factor	1.00		1.00					1.00	1.00	1.00	0.52	
Incremental Delay, d2	19.6		0.1					14.6	5.6	8.9	0.2	
Delay (s)	72.6		39.4					75.4	62.0	39.6	5.7	
Level of Service	E		D					E	E	D	A	
Approach Delay (s)		69.5			0.0			70.1			23.6	
Approach LOS		E			A			E			C	

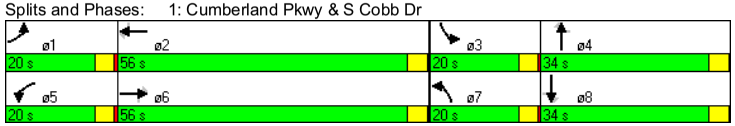
Intersection Summary					
HCM Average Control Delay	49.1	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.91				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	132.2%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Base 2009 SAT

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			232			75			78			121
Volume (vph)	136	843	254	124	854	149	358	948	115	249	926	125
Lane Group Flow (vph)	162	878	292	144	1005	157	385	1009	128	277	975	149
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	20.0	56.0	34.0	20.0	56.0	34.0	20.0	34.0	56.0	20.0	34.0	56.0
Act Effct Green (s)	14.8	52.6	30.0	14.2	52.0	31.4	15.9	31.4	52.6	14.6	30.0	52.0
Actuated g/C Ratio	0.11	0.41	0.23	0.11	0.40	0.24	0.12	0.24	0.41	0.11	0.23	0.40
v/c Ratio	0.79	0.61	0.53	0.74	0.70	0.36	0.91	1.17	0.18	0.71	1.18	0.21
Control Delay	82.4	32.5	14.1	77.6	35.4	24.1	81.2	131.5	11.3	65.9	137.4	7.4
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	82.4	32.5	14.1	77.6	35.4	24.1	81.2	131.5	11.3	65.9	137.4	7.4
LOS	F	C	B	E	D	C	F	F	B	E	F	A
Approach Delay		34.5			38.7			108.7			109.4	
Approach LOS		C			D			F			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 128.8			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.18			
Intersection Signal Delay: 74.7		Intersection LOS: E	
Intersection Capacity Utilization 80.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	136	843	254	124	854	149	358	948	115	249	926	125
Peak-hour factor, PHF	0.84	0.96	0.87	0.86	0.85	0.95	0.93	0.94	0.90	0.90	0.95	0.84
Adj. Flow (vph)	162	878	292	144	1005	157	385	1009	128	277	975	149
RTOR Reduction (vph)	0	0	178	0	0	57	0	0	46	0	0	72
Lane Group Flow (vph)	162	878	114	144	1005	100	385	1009	82	277	975	77
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	14.8	52.6	30.1	14.2	52.0	31.4	15.9	31.4	52.6	14.6	30.1	52.0
Effective Green, g (s)	14.8	52.6	30.1	14.2	52.0	31.4	15.9	31.4	52.6	14.6	30.1	52.0
Actuated g/C Ratio	0.11	0.41	0.23	0.11	0.40	0.24	0.12	0.24	0.41	0.11	0.23	0.40
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	203	1445	370	195	1429	386	424	863	646	389	827	639
v/s Ratio Prot	c0.09	0.25		0.08	c0.28		c0.11	c0.29		0.08	0.28	
v/s Ratio Perm			0.07			0.06			0.05			0.05
v/c Ratio	0.80	0.61	0.31	0.74	0.70	0.26	0.91	1.17	0.13	0.71	1.18	0.12
Uniform Delay, d1	55.5	30.0	40.8	55.5	32.0	39.3	55.7	48.7	23.8	55.1	49.4	24.1
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	19.3	1.9	0.5	13.6	2.9	0.4	22.7	88.5	0.4	6.1	93.0	0.4
Delay (s)	74.8	31.9	41.2	69.1	34.9	39.7	78.5	137.2	24.2	61.1	142.3	24.5
Level of Service	E	C	D	E	C	D	E	F	C	E	F	C
Approach Delay (s)		39.2			39.2			112.9			113.7	
Approach LOS		D			D			F			F	

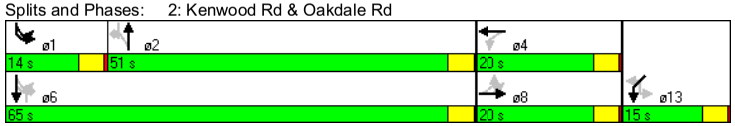
Intersection Summary					
HCM Average Control Delay	78.1	HCM Level of Service		E	
HCM Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	128.8	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	80.3%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	1707	0	1770	1632	0	0	1770	5075	0	1583
Flt Permitted			0.830		0.551				0.156			
Satd. Flow (perm)	0	0	1447	0	1026	1632	0	0	291	5075	0	1583
Satd. Flow (RTOR)			38			4						66
Volume (vph)	54	6	14	66	94	12	51	5	91	1305	18	64
Lane Group Flow (vph)	0	0	161	0	106	76	0	0	94	1364	0	66
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Total Split (s)	20.0	20.0	20.0	0.0	20.0	20.0	0.0	0.0	51.0	51.0	0.0	65.0
Act Effct Green (s)			13.8		13.8	13.8			52.3	52.3		61.0
Actuated g/C Ratio			0.14		0.14	0.14			0.52	0.52		0.61
v/c Ratio			0.69		0.75	0.33			0.62	0.51		0.07
Control Delay			46.6		71.7	39.9			33.1	10.3		1.2
Queue Delay			0.0		0.0	0.0			0.0	0.0		0.0
Total Delay			46.6		71.7	39.9			33.1	10.3		1.2
LOS			D		E	D			C	B		A
Approach Delay			46.6			58.4				11.3		
Approach LOS			D			E				B		

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 64.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Kenwood Rd & Oakdale Rd



Lane Group	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	1770	5085	1583	0	1770	1583	0
Flt Permitted		0.113				0.950		
Satd. Flow (perm)	0	210	5085	1583	0	1770	1583	0
Satd. Flow (RTOR)				49			13	
Volume (vph)	10	38	1446	46	3	64	4	12
Lane Group Flow (vph)	0	51	1538	49	0	72	17	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Total Split (s)	14.0	14.0	65.0	51.0	15.0	15.0	15.0	0.0
Act Effct Green (s)		61.0	61.0	52.3		13.2	13.2	
Actuated g/C Ratio		0.61	0.61	0.52		0.13	0.13	
v/c Ratio		0.22	0.50	0.06		0.31	0.08	
Control Delay		10.1	11.6	4.2		44.9	23.6	
Queue Delay		0.0	0.0	0.0		0.0	0.0	
Total Delay		10.1	11.6	4.2		44.9	23.6	
LOS		B	B	A		D	C	
Approach Delay			11.3			40.8		
Approach LOS			B			D		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Lane Util. Factor			1.00		1.00	1.00			1.00	0.91		1.00
Frt			0.94		1.00	0.88			1.00	1.00		0.85
Flt Protected			0.98		0.95	1.00			0.95	1.00		1.00
Satd. Flow (prot)			1707		1770	1631			1770	5075		1583
Flt Permitted			0.83		0.53	1.00			0.14	1.00		1.00
Satd. Flow (perm)			1441		982	1631			266	5075		1583
Volume (vph)	54	6	14	66	94	12	51	5	91	1305	18	64
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.89	0.89	0.89	0.89	0.97	0.97	0.97	0.97
Adj. Flow (vph)	62	7	16	76	106	13	57	6	94	1345	19	66
RTOR Reduction (vph)	0	0	33	0	0	3	0	0	0	0	0	26
Lane Group Flow (vph)	0	0	128	0	106	73	0	0	94	1364	0	40
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Actuated Green, G (s)			13.8		13.8	13.8			51.5	51.5		61.0
Effective Green, g (s)			13.8		13.8	13.8			51.5	51.5		61.0
Actuated g/C Ratio			0.14		0.14	0.14			0.52	0.52		0.61
Clearance Time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)			3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)			199		136	225			137	2614		966
v/s Ratio Prot						0.04				0.27		
v/s Ratio Perm			0.09		c0.11				c0.35			0.03
v/c Ratio			0.64		0.78	0.32			0.69	0.52		0.04
Uniform Delay, d1			40.8		41.6	38.9			18.2	16.1		7.8
Progression Factor			1.00		1.00	1.00			0.73	0.59		0.54
Incremental Delay, d2			7.0		24.0	0.8			21.8	0.7		0.1
Delay (s)			47.8		65.7	39.7			35.2	10.2		4.3
Level of Service			D		E	D			D	B		A
Approach Delay (s)			47.8			54.8				11.5		
Approach LOS			D			D				B		

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

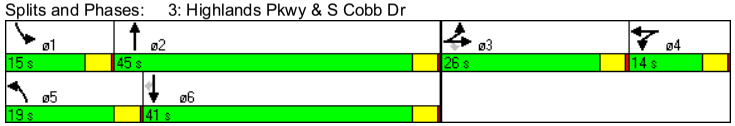
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5085	1583		1770	1583	
Flt Permitted		0.12	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		232	5085	1583		1770	1583	
Volume (vph)	10	38	1446	46	3	64	4	12
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	40	1538	49	3	69	4	13
RTOR Reduction (vph)	0	0	0	24	0	0	11	0
Lane Group Flow (vph)	0	51	1538	25	0	72	6	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Actuated Green, G (s)		61.0	61.0	51.5		13.2	13.2	
Effective Green, g (s)		61.0	61.0	51.5		13.2	13.2	
Actuated g/C Ratio		0.61	0.61	0.52		0.13	0.13	
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		226	3102	815		234	209	
v/s Ratio Prot		0.01	c0.30					
v/s Ratio Perm		0.13		0.02		0.04	0.00	
v/c Ratio		0.23	0.50	0.03		0.31	0.03	
Uniform Delay, d1		9.9	10.9	12.0		39.3	37.8	
Progression Factor		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.6	0.1		3.4	0.2	
Delay (s)		10.4	11.5	12.0		42.6	38.0	
Level of Service		B	B	B		D	D	
Approach Delay (s)			11.5			41.8		
Approach LOS			B			D		

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1697	1583	0	1780	0	3433	5045	0	1770	5085	1583
Flt Permitted	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (perm)	1681	1697	1583	0	1780	0	3433	5045	0	1770	5085	1583
Satd. Flow (RTOR)			281		6			10				114
Volume (vph)	248	15	274	63	31	15	271	1210	58	25	1342	276
Lane Group Flow (vph)	143	151	285	0	132	0	295	1314	0	33	1369	294
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Total Split (s)	26.0	26.0	26.0	14.0	14.0	0.0	19.0	45.0	0.0	15.0	41.0	41.0
Act Effct Green (s)	14.1	14.1	14.1		11.8		13.0	54.9		7.1	45.1	45.1
Actuated g/C Ratio	0.14	0.14	0.14		0.12		0.13	0.55		0.07	0.45	0.45
v/c Ratio	0.60	0.63	0.61		0.61		0.66	0.47		0.26	0.60	0.38
Control Delay	50.2	51.5	10.8		52.4		37.9	24.8		51.8	18.0	9.3
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	50.2	51.5	10.8		52.4		37.9	24.8		51.8	18.0	9.3
LOS	D	D	B		D		D	C		D	B	A
Approach Delay		31.2			52.4			27.2			17.2	
Approach LOS		C			D			C			B	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 69 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 24.4		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



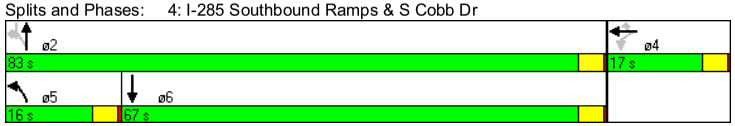
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		0.97	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1697	1583		1778		3433	5046		1770	5085	1583
Flt Permitted	0.95	0.96	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1697	1583		1778		3433	5046		1770	5085	1583
Volume (vph)	248	15	274	63	31	15	271	1210	58	25	1342	276
Peak-hour factor, PHF	0.91	0.70	0.96	0.82	0.81	0.88	0.92	0.97	0.86	0.75	0.98	0.94
Adj. Flow (vph)	273	21	285	77	38	17	295	1247	67	33	1369	294
RTOR Reduction (vph)	0	0	241	0	5	0	0	5	0	0	0	63
Lane Group Flow (vph)	143	151	44	0	127	0	295	1309	0	33	1369	231
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	14.1	14.1	14.1		11.8		13.0	53.3		4.8	45.1	45.1
Effective Green, g (s)	14.1	14.1	14.1		11.8		13.0	53.3		4.8	45.1	45.1
Actuated g/C Ratio	0.14	0.14	0.14		0.12		0.13	0.53		0.05	0.45	0.45
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	237	239	223		210		446	2690		85	2293	714
v/s Ratio Prot	0.09	c0.09			c0.07		c0.09	0.26		0.02	c0.27	
v/s Ratio Perm			0.03									0.15
v/c Ratio	0.60	0.63	0.20		0.60		0.66	0.49		0.39	0.60	0.32
Uniform Delay, d1	40.3	40.5	37.9		41.9		41.4	14.7		46.2	20.6	17.7
Progression Factor	1.00	1.00	1.00		1.00		0.81	1.53		1.09	0.76	0.63
Incremental Delay, d2	4.3	5.4	0.4		4.8		2.3	0.4		2.6	1.0	1.0
Delay (s)	44.6	45.9	38.4		46.7		35.7	23.0		52.9	16.7	12.2
Level of Service	D	D	D		D		D	C		D	B	B
Approach Delay (s)		41.9			46.7			25.3			16.6	
Approach LOS		D			D			C			B	

Intersection Summary					
HCM Average Control Delay	24.7	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.61				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1455	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950	0.996		0.184					
Satd. Flow (perm)	0	0	0	1681	1455	1504	343	3539	0	0	3539	1583
Satd. Flow (RTOR)					166	166						701
Volume (vph)	0	0	0	251	0	787	63	1077	0	0	1094	666
Lane Group Flow (vph)	0	0	0	274	466	435	77	1134	0	0	1128	701
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	17.0	17.0	17.0	16.0	83.0	0.0	0.0	67.0	83.0
Act Effct Green (s)				13.0	13.0	13.0	79.0	79.0			71.0	79.0
Actuated g/C Ratio				0.13	0.13	0.13	0.79	0.79			0.71	0.79
v/c Ratio				1.25	1.40	1.28	0.22	0.41			0.45	0.50
Control Delay				182.9	218.7	170.7	2.3	2.5			4.8	4.8
Queue Delay				77.0	52.5	0.0	0.0	0.3			0.0	0.0
Total Delay				259.9	271.2	170.7	2.3	2.8			4.8	4.8
LOS				F	F	F	A	A			A	A
Approach Delay					231.4			2.7			4.8	
Approach LOS					F			A			A	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.40			
Intersection Signal Delay: 67.4		Intersection LOS: E	
Intersection Capacity Utilization 98.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



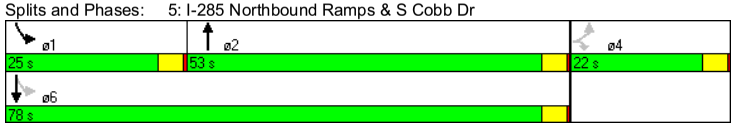
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.86	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1455	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.20	1.00			1.00	1.00
Satd. Flow (perm)				1681	1455	1504	377	3539			3539	1583
Volume (vph)	0	0	0	251	0	787	63	1077	0	0	1094	666
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.92	0.91	0.82	0.95	0.92	0.92	0.97	0.95
Adj. Flow (vph)	0	0	0	310	0	865	77	1134	0	0	1128	701
RTOR Reduction (vph)	0	0	0	0	144	144	0	0	0	0	0	147
Lane Group Flow (vph)	0	0	0	274	322	291	77	1134	0	0	1128	554
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				13.0	13.0	13.0	79.0	79.0			70.2	79.0
Effective Green, g (s)				13.0	13.0	13.0	79.0	79.0			70.2	79.0
Actuated g/C Ratio				0.13	0.13	0.13	0.79	0.79			0.70	0.79
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				219	189	196	365	2796			2484	1251
v/s Ratio Prot							0.01	0.32			0.32	
v/s Ratio Perm				0.16	0.22	0.19	0.16					c0.35
v/c Ratio				1.25	1.70	1.48	0.21	0.41			0.45	0.44
Uniform Delay, d1				43.5	43.5	43.5	3.6	3.2			6.5	3.4
Progression Factor				1.00	1.00	1.00	0.94	0.75			0.65	16.62
Incremental Delay, d2				144.9	337.3	242.4	0.0	0.0			0.5	1.0
Delay (s)				188.4	380.8	285.9	3.4	2.5			4.8	57.4
Level of Service				F	F	F	A	A			A	E
Approach Delay (s)		0.0			300.8			2.5			24.9	
Approach LOS		A			F			A			C	

Intersection Summary					
HCM Average Control Delay	95.4	HCM Level of Service		F	
HCM Volume to Capacity ratio	0.62				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	98.4%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3306	0	1770	3539	0
Flt Permitted	0.950									0.274		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3306	0	510	3539	0
Satd. Flow (RTOR)			64					281				
Volume (vph)	748	0	56	0	0	0	0	381	297	849	548	0
Lane Group Flow (vph)	813	0	64	0	0	0	0	736	0	884	583	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Total Split (s)	22.0	0.0	22.0	0.0	0.0	0.0	0.0	53.0	0.0	25.0	78.0	0.0
Act Effct Green (s)	18.0		18.0					49.0		74.0	74.0	
Actuated g/C Ratio	0.18		0.18					0.49		0.74	0.74	
v/c Ratio	1.32		0.19					0.42		1.38	0.22	
Control Delay	187.9		10.7					10.4		195.3	2.5	
Queue Delay	0.0		0.0					0.0		73.0	0.0	
Total Delay	187.9		10.7					10.4		268.3	2.5	
LOS	F		B					B		F	A	
Approach Delay								10.4			162.7	
Approach LOS								B			F	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 22 (22%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.38			
Intersection Signal Delay: 129.8		Intersection LOS: F	
Intersection Capacity Utilization 98.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00					0.95		1.00	0.95	
Frt	1.00		0.85					0.93		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433		1583					3304		1770	3539	
Flt Permitted	0.95		1.00					1.00		0.27	1.00	
Satd. Flow (perm)	3433		1583					3304		510	3539	
Volume (vph)	748	0	56	0	0	0	0	381	297	849	548	0
Peak-hour factor, PHF	0.92	0.92	0.88	0.92	0.92	0.92	0.92	0.93	0.91	0.96	0.94	0.92
Adj. Flow (vph)	813	0	64	0	0	0	0	410	326	884	583	0
RTOR Reduction (vph)	0	0	52	0	0	0	0	143	0	0	0	0
Lane Group Flow (vph)	813	0	12	0	0	0	0	593	0	884	583	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	18.0		18.0					49.0		74.0	74.0	
Effective Green, g (s)	18.0		18.0					49.0		74.0	74.0	
Actuated g/C Ratio	0.18		0.18					0.49		0.74	0.74	
Clearance Time (s)	4.0		4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	618		285					1619		642	2619	
v/s Ratio Prot								0.18		c0.29	0.16	
v/s Ratio Perm	c0.24		0.01							c0.73		
v/c Ratio	1.32		0.04					0.37		1.38	0.22	
Uniform Delay, d1	41.0		33.9					15.8		15.9	4.0	
Progression Factor	1.00		1.00					1.00		0.88	0.58	
Incremental Delay, d2	153.2		0.1					0.6		177.4	0.2	
Delay (s)	194.2		33.9					16.5		191.3	2.5	
Level of Service	F		C					B		F	A	
Approach Delay (s)		182.5			0.0			16.5			116.3	
Approach LOS		F			A			B			F	

Intersection Summary					
HCM Average Control Delay	111.3	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.35				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	98.4%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1827	0	0	1783	0	0	1736	0	0	1693	0
Flt Permitted		0.985									0.976	
Satd. Flow (perm)	0	1827	0	0	1783	0	0	1736	0	0	1693	0
Volume (vph)	31	65	1	0	67	37	0	1	1	40	0	43
Lane Group Flow (vph)	0	153	0	0	131	0	0	8	0	0	105	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	65	1	0	67	37	0	1	1	40	0	43
Peak Hour Factor	0.66	0.64	0.25	0.92	0.75	0.88	0.92	0.25	0.25	0.79	0.92	0.79
Hourly flow rate (vph)	47	102	4	0	89	42	0	4	4	51	0	54
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	89			106			362	287	104	314	310	110
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	89			106			362	287	104	314	310	110
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	99	100	92	100	94
cM capacity (veh/h)	1506			1486			546	603	951	618	586	943

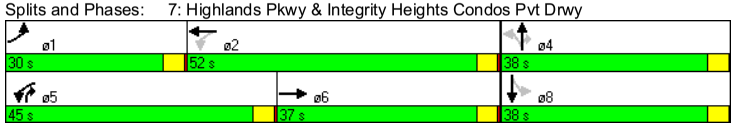
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	153	131	8	105
Volume Left	47	0	0	51
Volume Right	4	42	4	54
cSH	1506	1486	738	752
Volume to Capacity	0.03	0.00	0.01	0.14
Queue Length 95th (ft)	2	0	1	12
Control Delay (s)	2.5	0.0	9.9	10.6
Lane LOS	A		A	B
Approach Delay (s)	2.5	0.0	9.9	10.6
Approach LOS			A	B

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization		30.0%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3433	0	1770	3529	0	1770	1863	1583	0	1863	0
Flt Permitted	0.950			0.464			0.755					
Satd. Flow (perm)	1770	3433	0	864	3529	0	1406	1863	1583	0	1863	0
Satd. Flow (RTOR)		25			2				322			
Volume (vph)	1	209	43	311	198	1	37	1	303	0	2	0
Lane Group Flow (vph)	4	274	0	324	224	0	46	1	322	0	4	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Total Split (s)	30.0	37.0	0.0	45.0	52.0	0.0	38.0	38.0	45.0	38.0	38.0	0.0
Act Effct Green (s)	5.8	30.5		51.7	51.0		7.6	7.6	27.2		7.5	
Actuated g/C Ratio	0.08	0.48		0.84	0.82		0.12	0.12	0.44		0.11	
v/c Ratio	0.03	0.17		0.32	0.08		0.28	0.00	0.37		0.02	
Control Delay	33.0	8.6		3.0	3.1		32.1	27.0	3.5		27.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	33.0	8.6		3.0	3.1		32.1	27.0	3.5		27.0	
LOS	C	A		A	A		C	C	A		C	
Approach Delay		8.9			3.0			7.1			27.0	
Approach LOS		A			A			A			C	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 61.9			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 43.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 7: Highlands Pkwy & Integrity Heights Condos Pvt Drwy



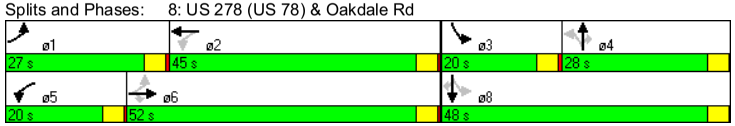
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3435		1770	3530		1770	1863	1583		1863	
Flt Permitted	0.95	1.00		0.52	1.00		0.82	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3435		962	3530		1521	1863	1583		1863	
Volume (vph)	1	209	43	311	198	1	37	1	303	0	2	0
Peak-hour factor, PHF	0.25	0.95	0.79	0.96	0.90	0.25	0.80	0.92	0.94	0.92	0.50	0.92
Adj. Flow (vph)	4	220	54	324	220	4	46	1	322	0	4	0
RTOR Reduction (vph)	0	13	0	0	1	0	0	0	206	0	0	0
Lane Group Flow (vph)	4	261	0	324	223	0	46	1	116	0	4	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Actuated Green, G (s)	1.0	30.9		54.1	49.1		4.9	4.9	24.1		4.9	
Effective Green, g (s)	1.0	30.9		54.1	49.1		4.9	4.9	24.1		4.9	
Actuated g/C Ratio	0.01	0.46		0.81	0.73		0.07	0.07	0.36		0.07	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	26	1584		1008	2587		111	136	664		136	
v/s Ratio Prot	0.00	0.08		c0.09	0.06			0.00	c0.05		0.00	
v/s Ratio Perm				c0.17			c0.03		0.02			
v/c Ratio	0.15	0.16		0.32	0.09		0.41	0.01	0.17		0.03	
Uniform Delay, d1	32.6	10.5		1.7	2.6		29.7	28.8	14.7		28.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.7	0.0		0.2	0.1		2.5	0.0	0.1		0.1	
Delay (s)	35.3	10.6		1.9	2.6		32.2	28.8	14.8		28.9	
Level of Service	D	B		A	A		C	C	B		C	
Approach Delay (s)		10.9			2.2			17.0			28.9	
Approach LOS		B			A			B			C	

Intersection Summary					
HCM Average Control Delay	8.9	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.31				
Actuated Cycle Length (s)	67.0	Sum of lost time (s)		4.0	
Intersection Capacity Utilization	43.1%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3497	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.179			0.290			0.690			0.523		
Satd. Flow (perm)	333	3539	1583	540	3497	0	1285	1863	1583	974	1863	1583
Satd. Flow (RTOR)			68		8				59			200
Volume (vph)	147	667	65	73	642	52	63	98	56	52	79	180
Lane Group Flow (vph)	165	741	76	85	764	0	81	115	59	63	103	200
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Total Split (s)	27.0	52.0	52.0	20.0	45.0	0.0	28.0	28.0	28.0	20.0	48.0	48.0
Act Effct Green (s)	57.5	50.3	50.3	53.4	46.5		10.9	10.9	10.9	20.7	20.4	20.4
Actuated g/C Ratio	0.65	0.57	0.57	0.59	0.53		0.12	0.12	0.12	0.23	0.23	0.23
v/c Ratio	0.46	0.37	0.08	0.20	0.41		0.51	0.50	0.24	0.21	0.24	0.38
Control Delay	11.0	13.5	4.5	8.1	15.1		49.3	45.1	12.6	27.5	27.8	6.2
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	11.0	13.5	4.5	8.1	15.1		49.3	45.1	12.6	27.5	27.8	6.2
LOS	B	B	A	A	B		D	D	B	C	C	A
Approach Delay		12.4			14.4			38.9			16.0	
Approach LOS		B			B			D			B	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 87.9			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 47.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: US 278 (US 78) & Oakdale Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3498		1770	1863	1583	1770	1863	1583
Flt Permitted	0.28	1.00	1.00	0.34	1.00		0.69	1.00	1.00	0.44	1.00	1.00
Satd. Flow (perm)	529	3539	1583	629	3498		1286	1863	1583	813	1863	1583
Volume (vph)	147	667	65	73	642	52	63	98	56	52	79	180
Peak-hour factor, PHF	0.89	0.90	0.85	0.86	0.91	0.88	0.78	0.85	0.95	0.82	0.77	0.90
Adj. Flow (vph)	165	741	76	85	705	59	81	115	59	63	103	200
RTOR Reduction (vph)	0	0	30	0	4	0	0	0	52	0	0	152
Lane Group Flow (vph)	165	741	46	85	760	0	81	115	7	63	103	48
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)	59.0	50.3	50.3	53.6	47.6		10.9	10.9	10.9	21.4	21.4	21.4
Effective Green, g (s)	59.0	50.3	50.3	53.6	47.6		10.9	10.9	10.9	21.4	21.4	21.4
Actuated g/C Ratio	0.66	0.56	0.56	0.60	0.53		0.12	0.12	0.12	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	468	1985	888	452	1856		156	226	192	263	444	378
v/s Ratio Prot	c0.03	0.21		0.01	c0.22			0.06		0.02	c0.06	
v/s Ratio Perm	0.20		0.03	0.10			c0.06		0.00	0.04		0.03
v/c Ratio	0.35	0.37	0.05	0.19	0.41		0.52	0.51	0.04	0.24	0.23	0.13
Uniform Delay, d1	6.7	10.9	8.9	7.7	12.6		36.9	36.9	34.8	27.1	27.5	26.8
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	0.5	0.5	0.1	0.2	0.7		2.9	1.8	0.1	0.5	0.3	0.2
Delay (s)	7.1	11.5	9.0	7.9	13.3		39.8	38.7	34.9	27.6	27.8	27.0
Level of Service	A	B	A	A	B		D	D	C	C	C	C
Approach Delay (s)		10.6			12.8			38.2			27.3	
Approach LOS		B			B			D			C	

Intersection Summary					
HCM Average Control Delay	16.7	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	89.7	Sum of lost time (s)		20.0	
Intersection Capacity Utilization	47.7%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1625	0	0	0	1611	1770	5085	1583	0	5080	0
Flt Permitted		0.996					0.950					
Satd. Flow (perm)	0	1625	0	0	0	1611	1770	5085	1583	0	5080	0
Volume (vph)	16	0	221	0	0	51	228	1554	49	0	1705	13
Lane Group Flow (vph)	0	259	0	0	0	64	285	1636	60	0	1793	0
Sign Control		Stop			Yield			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection has too many lanes per leg.
HCM All-Way analysis is limited to two lanes per leg.
Channelized right turn lanes are not counted.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1820	0	0	1857	0	0	1717	0	0	1611	0
Flt Permitted		0.999			0.997			0.969				
Satd. Flow (perm)	0	1820	0	0	1857	0	0	1717	0	0	1611	0
Volume (vph)	2	98	19	7	101	0	17	0	7	0	0	2
Lane Group Flow (vph)	0	156	0	0	136	0	0	33	0	0	4	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	98	19	7	101	0	17	0	7	0	0	2
Peak Hour Factor	0.50	0.77	0.75	0.88	0.79	0.92	0.80	0.92	0.58	0.92	0.92	0.50
Hourly flow rate (vph)	4	127	25	8	128	0	21	0	12	0	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	128			153			296	292	140	304	304	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	128			153			296	292	140	304	304	128
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	99	100	100	100
cM capacity (veh/h)	1458			1428			650	614	908	636	604	922

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	157	136	33	4
Volume Left	4	8	21	0
Volume Right	25	0	12	4
cSH	1458	1428	724	922
Volume to Capacity	0.00	0.01	0.05	0.00
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.2	0.5	10.2	8.9
Lane LOS	A	A	B	A
Approach Delay (s)	0.2	0.5	10.2	8.9
Approach LOS			B	A

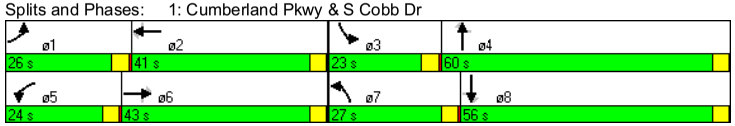
Intersection Summary					
Average Delay	1.4				
Intersection Capacity Utilization	23.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Base 2009 SAT Improved

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			292			114			55			83
Volume (vph)	136	843	254	124	854	149	358	948	115	249	926	125
Lane Group Flow (vph)	162	878	292	144	1005	157	385	1009	128	277	975	149
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	26.0	43.0	56.0	24.0	41.0	60.0	27.0	60.0	43.0	23.0	56.0	41.0
Act Effct Green (s)	16.6	39.7	42.4	15.2	38.4	46.0	19.0	46.0	39.7	15.3	42.4	38.4
Actuated g/C Ratio	0.13	0.30	0.32	0.11	0.29	0.35	0.14	0.35	0.30	0.12	0.32	0.29
v/c Ratio	0.73	0.58	0.41	0.71	0.68	0.25	0.78	0.82	0.25	0.70	0.86	0.29
Control Delay	77.4	43.6	5.4	77.9	47.1	11.0	68.4	46.1	25.0	68.1	51.5	21.4
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	77.4	43.6	5.4	77.9	47.1	11.0	68.4	46.1	25.0	68.1	51.5	21.4
LOS	E	D	A	E	D	B	E	D	C	E	D	C
Approach Delay		39.3			46.2			50.0			51.6	
Approach LOS		D			D			D			D	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 132.6			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 46.9		Intersection LOS: D	
Intersection Capacity Utilization 73.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



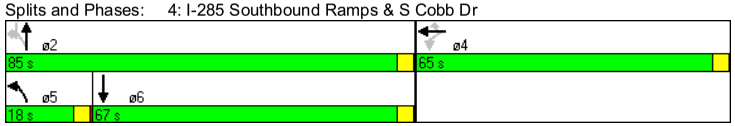
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	136	843	254	124	854	149	358	948	115	249	926	125
Peak-hour factor, PHF	0.84	0.96	0.87	0.86	0.85	0.95	0.93	0.94	0.90	0.90	0.95	0.84
Adj. Flow (vph)	162	878	292	144	1005	157	385	1009	128	277	975	149
RTOR Reduction (vph)	0	0	198	0	0	74	0	0	38	0	0	59
Lane Group Flow (vph)	162	878	94	144	1005	83	385	1009	90	277	975	90
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	16.6	39.8	42.4	15.2	38.4	46.1	19.0	46.1	39.8	15.3	42.4	38.4
Effective Green, g (s)	16.6	39.8	42.4	15.2	38.4	46.1	19.0	46.1	39.8	15.3	42.4	38.4
Actuated g/C Ratio	0.13	0.30	0.32	0.11	0.29	0.35	0.14	0.35	0.30	0.12	0.32	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	222	1529	507	203	1475	551	493	1232	476	397	1133	459
v/s Ratio Prot	c0.09	0.17		0.08	c0.20		c0.11	c0.29		0.08	0.28	
v/s Ratio Perm			0.06			0.05			0.06			0.06
v/c Ratio	0.73	0.57	0.18	0.71	0.68	0.15	0.78	0.82	0.19	0.70	0.86	0.20
Uniform Delay, d1	55.7	39.1	32.5	56.5	41.6	29.7	54.7	39.3	34.3	56.3	42.2	35.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.4	1.6	0.2	10.8	2.6	0.1	7.9	4.4	0.9	5.3	6.9	1.0
Delay (s)	67.1	40.7	32.7	67.3	44.2	29.8	62.6	43.7	35.2	61.6	49.1	36.3
Level of Service	E	D	C	E	D	C	E	D	D	E	D	D
Approach Delay (s)		42.2			45.0			47.8			50.2	
Approach LOS		D			D			D			D	

Intersection Summary					
HCM Average Control Delay	46.4	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.77				
Actuated Cycle Length (s)	132.4	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	73.2%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1441	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950			0.091					
Satd. Flow (perm)	0	0	0	1681	1441	1504	170	3539	0	0	3539	1583
Satd. Flow (RTOR)					66	66						677
Volume (vph)	0	0	0	251	0	787	63	1077	0	0	1094	666
Lane Group Flow (vph)	0	0	0	310	432	433	77	1134	0	0	1128	701
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	65.0	65.0	65.0	18.0	85.0	0.0	0.0	67.0	85.0
Act Effct Green (s)				45.1	45.1	45.1	96.9	96.9			86.8	96.9
Actuated g/C Ratio				0.30	0.30	0.30	0.65	0.65			0.58	0.65
v/c Ratio				0.61	0.90	0.87	0.44	0.50			0.55	0.56
Control Delay				48.8	63.7	58.7	19.0	0.6			11.1	2.4
Queue Delay				0.0	0.0	0.0	0.0	0.5			0.1	0.0
Total Delay				48.8	63.7	58.7	19.0	1.1			11.3	2.4
LOS				D	E	E	B	A			B	A
Approach Delay					57.9			2.2			7.9	
Approach LOS					E			A			A	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 132 (88%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 20.2		Intersection LOS: C	
Intersection Capacity Utilization 96.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



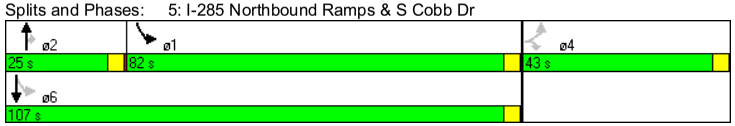
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.85	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1441	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.17	1.00			1.00	1.00
Satd. Flow (perm)				1681	1441	1504	309	3539			3539	1583
Volume (vph)	0	0	0	251	0	787	63	1077	0	0	1094	666
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.92	0.91	0.82	0.95	0.92	0.92	0.97	0.95
Adj. Flow (vph)	0	0	0	310	0	865	77	1134	0	0	1128	701
RTOR Reduction (vph)	0	0	0	0	46	46	0	0	0	0	0	240
Lane Group Flow (vph)	0	0	0	310	386	387	77	1134	0	0	1128	461
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				45.1	45.1	45.1	96.9	96.9			86.8	96.9
Effective Green, g (s)				45.1	45.1	45.1	96.9	96.9			86.8	96.9
Actuated g/C Ratio				0.30	0.30	0.30	0.65	0.65			0.58	0.65
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				505	433	452	259	2286			2048	1023
v/s Ratio Prot							0.01	c0.32			c0.32	
v/s Ratio Perm				0.18	0.27	0.26	0.18					0.29
v/c Ratio				0.61	0.89	0.86	0.30	0.50			0.55	0.45
Uniform Delay, d1				45.0	50.1	49.4	13.7	13.8			19.5	13.3
Progression Factor				1.00	1.00	1.00	1.24	0.02			0.46	0.53
Incremental Delay, d2				2.2	19.9	14.7	0.3	0.3			1.0	1.3
Delay (s)				47.2	70.0	64.0	17.3	0.6			10.0	8.4
Level of Service				D	E	E	B	A			B	A
Approach Delay (s)		0.0			61.8			1.7			9.4	
Approach LOS		A			E			A			A	

Intersection Summary				
HCM Average Control Delay	21.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	96.8%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.234		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	436	3539	0
Satd. Flow (RTOR)			64						295			
Volume (vph)	748	0	56	0	0	0	0	381	297	849	548	0
Lane Group Flow (vph)	813	0	64	0	0	0	0	410	326	884	583	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Total Split (s)	43.0	0.0	43.0	0.0	0.0	0.0	0.0	25.0	25.0	82.0	107.0	0.0
Act Effct Green (s)	37.9		37.9					22.1	22.1	104.1	104.1	
Actuated g/C Ratio	0.25		0.25					0.15	0.15	0.69	0.69	
v/c Ratio	0.94		0.14					0.79	0.67	0.89	0.24	
Control Delay	73.3		10.0					73.5	16.7	45.8	8.8	
Queue Delay	0.4		0.0					0.0	0.0	0.0	0.0	
Total Delay	73.6		10.0					73.5	16.7	45.8	8.8	
LOS	E		B					E	B	D	A	
Approach Delay								48.3			31.1	
Approach LOS								D			C	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 147 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 46.0		Intersection LOS: D	
Intersection Capacity Utilization 96.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97		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)	3433		1583					3539	1583	1770	3539	
Flt Permitted	0.95		1.00					1.00	1.00	0.25	1.00	
Satd. Flow (perm)	3433		1583					3539	1583	463	3539	
Volume (vph)	748	0	56	0	0	0	0	381	297	849	548	0
Peak-hour factor, PHF	0.92	0.92	0.88	0.92	0.92	0.92	0.92	0.93	0.91	0.96	0.94	0.92
Adj. Flow (vph)	813	0	64	0	0	0	0	410	326	884	583	0
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	252	0	0	0
Lane Group Flow (vph)	813	0	16	0	0	0	0	410	74	884	583	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Actuated Green, G (s)	37.9		37.9					22.1	22.1	104.1	104.1	
Effective Green, g (s)	37.9		37.9					22.1	22.1	104.1	104.1	
Actuated g/C Ratio	0.25		0.25					0.15	0.15	0.69	0.69	
Clearance Time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	867		400					521	233	1001	2456	
v/s Ratio Prot								0.12		c0.46	0.16	
v/s Ratio Perm	c0.24		0.01						0.05	c0.15		
v/c Ratio	0.94		0.04					0.79	0.32	0.88	0.24	
Uniform Delay, d1	54.9		42.3					61.7	57.2	25.6	8.4	
Progression Factor	1.00		1.00					1.00	1.00	1.26	1.00	
Incremental Delay, d2	17.2		0.0					11.4	3.6	8.0	0.2	
Delay (s)	72.1		42.4					73.1	60.8	40.2	8.6	
Level of Service	E		D					E	E	D	A	
Approach Delay (s)		69.9			0.0			67.6			27.6	
Approach LOS		E			A			E			C	

Intersection Summary					
HCM Average Control Delay	49.2	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.89				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	96.8%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

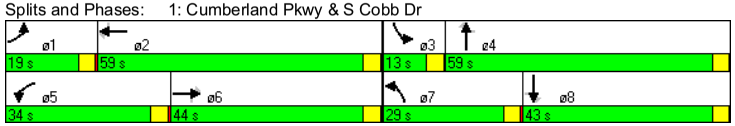
Future Intersection Analysis

Future 2009 PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			122			34			68			82
Volume (vph)	177	907	156	205	2033	129	586	1228	174	207	954	98
Lane Group Flow (vph)	203	945	184	228	2140	143	637	1364	212	233	984	124
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	19.0	44.0	43.0	34.0	59.0	59.0	29.0	59.0	44.0	13.0	43.0	59.0
Act Effct Green (s)	15.0	46.7	39.0	23.3	55.0	55.0	25.0	55.0	46.7	9.0	39.0	55.0
Actuated g/C Ratio	0.10	0.31	0.26	0.16	0.37	0.37	0.17	0.37	0.31	0.06	0.26	0.37
v/c Ratio	1.15	0.86	0.37	0.83	1.65	0.24	1.11	1.05	0.39	1.13	1.07	0.20
Control Delay	169.9	57.7	18.1	85.2	327.2	26.0	128.3	85.0	30.7	162.8	101.9	12.9
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	169.9	57.7	18.1	85.2	327.2	26.0	128.3	85.0	30.7	162.8	101.9	12.9
LOS	F	E	B	F	F	C	F	F	C	F	F	B
Approach Delay		69.3			288.1			92.3			104.3	
Approach LOS		E			F			F			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.65			
Intersection Signal Delay: 156.8		Intersection LOS: F	
Intersection Capacity Utilization 122.4%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



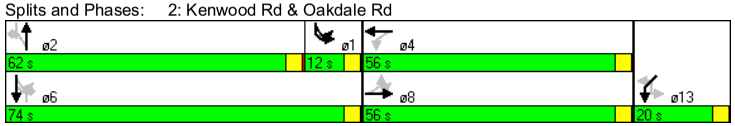
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	177	907	156	205	2033	129	586	1228	174	207	954	98
Peak-hour factor, PHF	0.87	0.96	0.85	0.90	0.95	0.90	0.92	0.90	0.82	0.89	0.97	0.79
Adj. Flow (vph)	203	945	184	228	2140	143	637	1364	212	233	984	124
RTOR Reduction (vph)	0	0	90	0	0	22	0	0	47	0	0	52
Lane Group Flow (vph)	203	945	94	228	2140	121	637	1364	165	233	984	72
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	15.0	46.7	39.0	23.3	55.0	55.0	25.0	55.0	46.7	9.0	39.0	55.0
Effective Green, g (s)	15.0	46.7	39.0	23.3	55.0	55.0	25.0	55.0	46.7	9.0	39.0	55.0
Actuated g/C Ratio	0.10	0.31	0.26	0.16	0.37	0.37	0.17	0.37	0.31	0.06	0.26	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	177	1102	412	275	1298	580	572	1298	493	206	920	580
v/s Ratio Prot	c0.11	0.27		0.13	c0.60		c0.19	c0.39		0.07	0.28	
v/s Ratio Perm			0.06			0.08			0.10			0.05
v/c Ratio	1.15	0.86	0.23	0.83	1.65	0.21	1.11	1.05	0.34	1.13	1.07	0.12
Uniform Delay, d1	67.5	48.5	43.7	61.4	47.5	32.6	62.5	47.5	39.7	70.5	55.5	31.5
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	112.7	8.7	0.3	18.3	295.4	0.2	72.8	39.5	1.8	102.4	50.1	0.4
Delay (s)	180.2	57.2	43.9	79.7	342.9	32.8	135.3	87.0	41.5	172.9	105.6	32.0
Level of Service	F	E	D	E	F	C	F	F	D	F	F	C
Approach Delay (s)		74.1			301.3			96.5			110.5	
Approach LOS		E			F			F			F	

Intersection Summary					
HCM Average Control Delay	164.5	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.30				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	122.4%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	1729	0	1770	1628	0	0	1770	5070	0	1583
Flt Permitted			0.715		0.619				0.118			
Satd. Flow (perm)	0	0	1257	0	1153	1628	0	0	220	5070	0	1583
Satd. Flow (RTOR)			26			1						81
Volume (vph)	37	3	26	47	490	46	225	11	107	1842	37	215
Lane Group Flow (vph)	0	0	151	0	505	290	0	0	108	1898	0	217
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Total Split (s)	56.0	56.0	56.0	0.0	56.0	56.0	0.0	0.0	62.0	62.0	0.0	74.0
Act Effct Green (s)			52.0		52.0	52.0			58.0	58.0		70.0
Actuated g/C Ratio			0.35		0.35	0.35			0.39	0.39		0.47
v/c Ratio			0.33		1.26	0.51			1.27	0.97		0.28
Control Delay			32.1		177.3	42.7			151.2	15.8		2.0
Queue Delay			0.0		0.0	0.0			0.0	40.2		0.0
Total Delay			32.1		177.3	42.7			151.2	56.1		2.0
LOS			C		F	D			F	E		A
Approach Delay			32.1			128.2				55.4		
Approach LOS			C			F				E		

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 112 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 63.4		Intersection LOS: E	
Intersection Capacity Utilization 102.7%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: Kenwood Rd & Oakdale Rd



Lane Group	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	1770	5085	1583	0	1770	1583	0
Flt Permitted		0.065				0.950		
Satd. Flow (perm)	0	121	5085	1583	0	1770	1583	0
Satd. Flow (RTOR)				34			9	
Volume (vph)	2	131	1261	33	11	145	11	8
Lane Group Flow (vph)	0	136	1287	34	0	177	21	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Total Split (s)	12.0	12.0	74.0	62.0	20.0	20.0	20.0	0.0
Act Effct Green (s)		70.0	70.0	58.0		16.0	16.0	
Actuated g/C Ratio		0.47	0.47	0.39		0.11	0.11	
v/c Ratio		0.94	0.54	0.05		0.94	0.12	
Control Delay		117.9	29.6	8.8		116.1	42.9	
Queue Delay		0.0	0.0	0.0		0.0	0.0	
Total Delay		117.9	29.7	8.8		116.1	42.9	
LOS		F	C	A		F	D	
Approach Delay			37.4			108.3		
Approach LOS			D			F		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Lane Util. Factor			1.00		1.00	1.00			1.00	0.91		1.00
Frt			0.94		1.00	0.87			1.00	1.00		0.85
Flt Protected			0.98		0.95	1.00			0.95	1.00		1.00
Satd. Flow (prot)			1728		1770	1629			1770	5070		1583
Flt Permitted			0.71		0.62	1.00			0.12	1.00		1.00
Satd. Flow (perm)			1256		1153	1629			219	5070		1583
Volume (vph)	37	3	26	47	490	46	225	11	107	1842	37	215
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.97	0.97	0.97	0.97	0.99	0.99	0.99	0.99
Adj. Flow (vph)	49	4	35	63	505	47	232	11	108	1861	37	217
RTOR Reduction (vph)	0	0	17	0	0	1	0	0	0	0	0	43
Lane Group Flow (vph)	0	0	134	0	505	289	0	0	108	1898	0	174
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Actuated Green, G (s)			52.0		52.0	52.0			58.0	58.0		70.0
Effective Green, g (s)			52.0		52.0	52.0			58.0	58.0		70.0
Actuated g/C Ratio			0.35		0.35	0.35			0.39	0.39		0.47
Clearance Time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)			3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)			435		400	565			85	1960		739
v/s Ratio Prot						0.18				0.37		
v/s Ratio Perm			0.11		c0.44				c0.49			0.11
v/c Ratio			0.31		1.26	0.51			1.27	0.97		0.24
Uniform Delay, d1			35.8		49.0	38.9			46.0	45.1		24.0
Progression Factor			1.00		1.00	1.00			0.28	0.28		0.13
Incremental Delay, d2			0.4		136.8	0.8			130.1	2.2		0.1
Delay (s)			36.2		185.8	39.7			143.1	14.7		3.2
Level of Service			D		F	D			F	B		A
Approach Delay (s)			36.2			132.5				19.8		
Approach LOS			D			F				B		

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

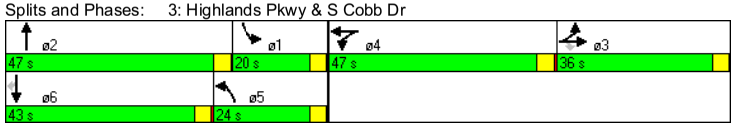
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5085	1583		1770	1583	
Flt Permitted		0.06	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		120	5085	1583		1770	1583	
Volume (vph)	2	131	1261	33	11	145	11	8
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.88	0.88	0.88	0.88
Adj. Flow (vph)	2	134	1287	34	12	165	12	9
RTOR Reduction (vph)	0	0	0	21	0	0	8	0
Lane Group Flow (vph)	0	136	1287	13	0	177	13	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Actuated Green, G (s)		70.0	70.0	58.0		16.0	16.0	
Effective Green, g (s)		70.0	70.0	58.0		16.0	16.0	
Actuated g/C Ratio		0.47	0.47	0.39		0.11	0.11	
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		144	2373	612		189	169	
v/s Ratio Prot		c0.05	0.25					
v/s Ratio Perm		0.39		0.01		0.10	0.01	
v/c Ratio		0.94	0.54	0.02		0.94	0.08	
Uniform Delay, d1		65.5	28.6	28.4		66.5	60.3	
Progression Factor		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		57.9	0.9	0.1		50.7	0.9	
Delay (s)		123.4	29.5	28.5		117.2	61.2	
Level of Service		F	C	C		F	E	
Approach Delay (s)			38.2			111.2		
Approach LOS			D			F		

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1709	1583	0	1736	0	3433	4999	0	1770	5085	1583
Flt Permitted	0.950	0.966			0.975		0.950			0.950		
Satd. Flow (perm)	1681	1709	1583	0	1736	0	3433	4999	0	1770	5085	1583
Satd. Flow (RTOR)			290		16			15				167
Volume (vph)	680	86	497	277	89	157	520	1416	155	176	1079	561
Lane Group Flow (vph)	414	435	529	0	641	0	559	1649	0	226	1112	616
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Total Split (s)	36.0	36.0	36.0	47.0	47.0	0.0	24.0	47.0	0.0	20.0	43.0	43.0
Act Effct Green (s)	32.0	32.0	32.0		43.0		20.0	43.0		16.0	39.0	39.0
Actuated g/C Ratio	0.21	0.21	0.21		0.29		0.13	0.29		0.11	0.26	0.26
v/c Ratio	1.15	1.19	0.93		1.26		1.22	1.14		1.20	0.84	1.15
Control Delay	147.0	159.7	50.6		174.3		165.8	120.1		166.1	41.3	105.7
Queue Delay	0.0	0.0	0.0		0.0		0.0	69.4		0.0	0.6	12.2
Total Delay	147.0	159.7	50.6		174.3		165.8	189.4		166.1	41.9	117.9
LOS	F	F	D		F		F	F		F	D	F
Approach Delay		114.0			174.3			183.5			80.2	
Approach LOS		F			F			F			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 120 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay: 134.4		Intersection LOS: F	
Intersection Capacity Utilization 91.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



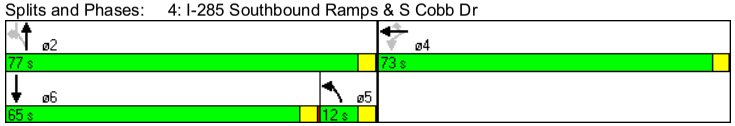
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		0.97	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	0.97	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1709	1583		1737		3433	4998		1770	5085	1583
Flt Permitted	0.95	0.97	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1709	1583		1737		3433	4998		1770	5085	1583
Volume (vph)	680	86	497	277	89	157	520	1416	155	176	1079	561
Peak-hour factor, PHF	0.94	0.68	0.94	0.86	0.81	0.75	0.93	0.97	0.82	0.78	0.97	0.91
Adj. Flow (vph)	723	126	529	322	110	209	559	1460	189	226	1112	616
RTOR Reduction (vph)	0	0	228	0	11	0	0	11	0	0	0	124
Lane Group Flow (vph)	414	435	301	0	630	0	559	1638	0	226	1112	492
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	32.0	32.0	32.0		43.0		20.0	43.0		16.0	39.0	39.0
Effective Green, g (s)	32.0	32.0	32.0		43.0		20.0	43.0		16.0	39.0	39.0
Actuated g/C Ratio	0.21	0.21	0.21		0.29		0.13	0.29		0.11	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	359	365	338		498		458	1433		189	1322	412
v/s Ratio Prot	0.25	c0.25			c0.36		c0.16	0.33		0.13	0.22	
v/s Ratio Perm			0.19									c0.31
v/c Ratio	1.15	1.19	0.89		1.26		1.22	1.14		1.20	0.84	1.20
Uniform Delay, d1	59.0	59.0	57.3		53.5		65.0	53.5		67.0	52.6	55.5
Progression Factor	1.00	1.00	1.00		1.00		1.03	1.07		0.89	0.70	0.58
Incremental Delay, d2	96.0	110.3	24.0		134.2		112.4	70.7		116.4	4.4	102.6
Delay (s)	155.0	169.3	81.2		187.7		179.1	128.1		176.1	41.1	134.5
Level of Service	F	F	F		F		F	F		F	D	F
Approach Delay (s)		131.2			187.7			141.0			86.2	
Approach LOS		F			F			F			F	

Intersection Summary					
HCM Average Control Delay	126.3	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.22				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	91.2%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1441	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950			0.063					
Satd. Flow (perm)	0	0	0	1681	1441	1504	117	3539	0	0	3539	1583
Satd. Flow (RTOR)					22	22						705
Volume (vph)	0	0	0	436	0	1031	71	1348	0	0	1179	832
Lane Group Flow (vph)	0	0	0	459	573	573	85	1390	0	0	1241	895
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	73.0	73.0	73.0	12.0	77.0	0.0	0.0	65.0	77.0
Act Effct Green (s)				62.3	62.3	62.3	79.7	79.7			67.7	79.7
Actuated g/C Ratio				0.42	0.42	0.42	0.53	0.53			0.45	0.53
v/c Ratio				0.66	0.94	0.90	0.57	0.74			0.78	0.76
Control Delay				39.4	63.5	56.7	16.3	2.4			18.0	8.1
Queue Delay				0.3	0.0	0.0	0.0	0.7			0.7	0.0
Total Delay				39.7	63.5	56.7	16.3	3.1			18.7	8.1
LOS				D	E	E	B	A			B	A
Approach Delay					54.3			3.8			14.3	
Approach LOS					D			A			B	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 117 (78%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 144.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



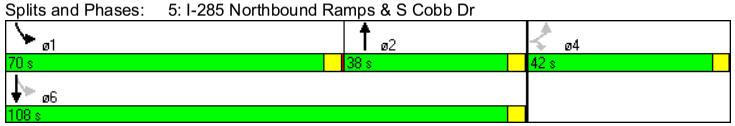
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.85	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1441	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.09	1.00			1.00	1.00
Satd. Flow (perm)				1681	1441	1504	169	3539			3539	1583
Volume (vph)	0	0	0	436	0	1031	71	1348	0	0	1179	832
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.92	0.90	0.84	0.97	0.92	0.92	0.95	0.93
Adj. Flow (vph)	0	0	0	459	0	1146	85	1390	0	0	1241	895
RTOR Reduction (vph)	0	0	0	0	13	13	0	0	0	0	0	330
Lane Group Flow (vph)	0	0	0	459	560	560	85	1390	0	0	1241	565
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				62.3	62.3	62.3	79.7	79.7			67.7	79.7
Effective Green, g (s)				62.3	62.3	62.3	79.7	79.7			67.7	79.7
Actuated g/C Ratio				0.42	0.42	0.42	0.53	0.53			0.45	0.53
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				698	598	625	175	1880			1597	841
v/s Ratio Prot							0.03	c0.39			c0.35	
v/s Ratio Perm				0.27	0.39	0.37	0.23					0.36
v/c Ratio				0.66	0.94	0.90	0.49	0.74			0.78	0.67
Uniform Delay, d1				35.3	42.0	40.8	53.5	27.1			34.8	25.6
Progression Factor				1.00	1.00	1.00	0.31	0.07			0.43	0.89
Incremental Delay, d2				2.2	22.2	15.4	0.2	0.2			2.1	2.4
Delay (s)				37.5	64.2	56.2	16.9	2.2			17.1	25.3
Level of Service				D	E	E	B	A			B	C
Approach Delay (s)		0.0			53.7			3.1			20.5	
Approach LOS		A			D			A			C	

Intersection Summary					
HCM Average Control Delay	25.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	144.2%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3341	0	1770	3539	0
Flt Permitted	0.950									0.105		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3341	0	196	3539	0
Satd. Flow (RTOR)			88					76				
Volume (vph)	921	0	80	0	0	0	0	518	281	862	720	0
Lane Group Flow (vph)	940	0	94	0	0	0	0	888	0	917	774	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Total Split (s)	42.0	0.0	42.0	0.0	0.0	0.0	0.0	38.0	0.0	70.0	108.0	0.0
Act Effct Green (s)	38.0		38.0					34.0		104.0	104.0	
Actuated g/C Ratio	0.25		0.25					0.23		0.69	0.69	
v/c Ratio	1.08		0.20					1.09		1.11	0.32	
Control Delay	106.4		10.6					106.8		100.1	16.6	
Queue Delay	0.0		0.0					0.0		145.2	0.7	
Total Delay	106.4		10.6					106.8		245.3	17.3	
LOS	F		B					F		F	B	
Approach Delay								106.8			141.0	
Approach LOS								F			F	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 101 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 120.2		Intersection LOS: F	
Intersection Capacity Utilization 144.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00					0.95		1.00	0.95	
Frt	1.00		0.85					0.94		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433		1583					3341		1770	3539	
Flt Permitted	0.95		1.00					1.00		0.11	1.00	
Satd. Flow (perm)	3433		1583					3341		196	3539	
Volume (vph)	921	0	80	0	0	0	0	518	281	862	720	0
Peak-hour factor, PHF	0.98	0.92	0.85	0.92	0.92	0.92	0.92	0.93	0.85	0.94	0.93	0.92
Adj. Flow (vph)	940	0	94	0	0	0	0	557	331	917	774	0
RTOR Reduction (vph)	0	0	66	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	940	0	28	0	0	0	0	829	0	917	774	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	38.0		38.0					34.0		104.0	104.0	
Effective Green, g (s)	38.0		38.0					34.0		104.0	104.0	
Actuated g/C Ratio	0.25		0.25					0.23		0.69	0.69	
Clearance Time (s)	4.0		4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	870		401					757		828	2454	
v/s Ratio Prot								0.25		c0.49	0.22	
v/s Ratio Perm	c0.27		0.02							c0.28		
v/c Ratio	1.08		0.07					1.10		1.11	0.32	
Uniform Delay, d1	56.0		42.6					58.0		44.2	9.0	
Progression Factor	1.00		1.00					1.00		1.20	1.80	
Incremental Delay, d2	54.6		0.1					61.9		60.0	0.2	
Delay (s)	110.6		42.6					119.9		113.0	16.5	
Level of Service	F		D					F		F	B	
Approach Delay (s)		104.4			0.0			119.9			68.8	
Approach LOS		F			A			F			E	

Intersection Summary					
HCM Average Control Delay	91.6	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.09				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	144.2%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1814	0	0	1837	0	0	1767	0	0	1674	0
Flt Permitted		0.976						0.983			0.983	
Satd. Flow (perm)	0	1814	0	0	1837	0	0	1767	0	0	1674	0
Volume (vph)	99	112	1	0	348	36	8	10	6	110	2	185
Lane Group Flow (vph)	0	242	0	0	416	0	0	46	0	0	349	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	99	112	1	0	348	36	8	10	6	110	2	185
Peak Hour Factor	0.84	0.93	0.25	0.92	0.93	0.85	0.50	0.56	0.50	0.90	0.50	0.83
Hourly flow rate (vph)	118	120	4	0	374	42	16	18	12	122	4	223
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	374			124			978	732	122	774	756	395
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374			124			978	732	122	774	756	395
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			100			88	94	99	56	99	66
cM capacity (veh/h)	1184			1462			138	313	929	275	304	654

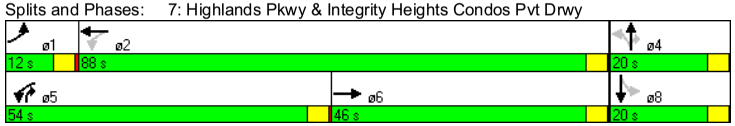
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	242	417	46	349
Volume Left	118	0	16	122
Volume Right	4	42	12	223
cSH	1184	1462	247	437
Volume to Capacity	0.10	0.00	0.19	0.80
Queue Length 95th (ft)	8	0	17	180
Control Delay (s)	4.5	0.0	22.9	38.6
Lane LOS	A		C	E
Approach Delay (s)	4.5	0.0	22.9	38.6
Approach LOS			C	E

Intersection Summary					
Average Delay		14.8			
Intersection Capacity Utilization	66.0%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3415	0	1770	3511	0	1770	1863	1583	0	1789	0
Flt Permitted	0.950			0.087			0.714				0.873	
Satd. Flow (perm)	1770	3415	0	162	3511	0	1330	1863	1583	0	1599	0
Satd. Flow (RTOR)		38			11				37		5	
Volume (vph)	5	807	236	726	467	14	82	2	456	21	17	3
Lane Group Flow (vph)	8	1148	0	764	518	0	111	4	470	0	63	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Total Split (s)	12.0	46.0	0.0	54.0	88.0	0.0	20.0	20.0	54.0	20.0	20.0	0.0
Act Effct Green (s)	6.2	42.3		93.7	91.5		13.4	13.4	64.7		13.4	
Actuated g/C Ratio	0.05	0.37		0.81	0.79		0.12	0.12	0.56		0.12	
v/c Ratio	0.09	0.90		0.96	0.19		0.72	0.02	0.52		0.33	
Control Delay	58.4	44.7		52.1	3.5		75.2	45.5	16.3		49.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	58.4	44.7		52.1	3.5		75.2	45.5	16.3		49.0	
LOS	E	D		D	A		E	D	B		D	
Approach Delay		44.8			32.5			27.6			49.0	
Approach LOS		D			C			C			D	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 115.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 36.5		Intersection LOS: D	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 7: Highlands Pkwy & Integrity Heights Condos Pvt Drwy



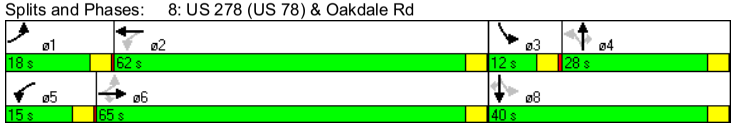
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3414		1770	3513		1770	1863	1583		1788	
Flt Permitted	0.95	1.00		0.08	1.00		0.71	1.00	1.00		0.87	
Satd. Flow (perm)	1770	3414		151	3513		1323	1863	1583		1586	
Volume (vph)	5	807	236	726	467	14	82	2	456	21	17	3
Peak-hour factor, PHF	0.62	0.92	0.87	0.95	0.95	0.54	0.74	0.50	0.97	0.71	0.67	0.38
Adj. Flow (vph)	8	877	271	764	492	26	111	4	470	30	25	8
RTOR Reduction (vph)	0	23	0	0	2	0	0	0	18	0	4	0
Lane Group Flow (vph)	8	1125	0	764	516	0	111	4	452	0	59	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Actuated Green, G (s)	1.4	45.5		96.9	91.5		13.4	13.4	60.8		13.4	
Effective Green, g (s)	1.4	45.5		96.9	91.5		13.4	13.4	60.8		13.4	
Actuated g/C Ratio	0.01	0.38		0.82	0.77		0.11	0.11	0.51		0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	21	1313		772	2717		150	211	867		180	
v/s Ratio Prot	0.00	0.33		c0.40	0.15			0.00	0.21			
v/s Ratio Perm				c0.42			c0.08		0.08		0.04	
v/c Ratio	0.38	0.86		0.99	0.19		0.74	0.02	0.52		0.33	
Uniform Delay, d1	58.0	33.4		31.0	3.6		50.8	46.6	19.1		48.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	11.2	5.7		29.5	0.2		17.7	0.0	0.6		1.1	
Delay (s)	69.2	39.1		60.4	3.7		68.4	46.6	19.7		49.3	
Level of Service	E	D		E	A		E	D	B		D	
Approach Delay (s)		39.3			37.5			29.1			49.3	
Approach LOS		D			D			C			D	

Intersection Summary				
HCM Average Control Delay	36.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	118.3	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	89.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3497	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.066			0.424			0.416			0.465		
Satd. Flow (perm)	123	3539	1583	790	3497	0	775	1863	1583	866	1863	1583
Satd. Flow (RTOR)			80		11				119			190
Volume (vph)	187	489	72	220	1319	115	80	133	100	116	339	498
Lane Group Flow (vph)	203	532	80	239	1562	0	94	145	119	138	368	530
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Total Split (s)	18.0	65.0	65.0	15.0	62.0	0.0	28.0	28.0	28.0	12.0	40.0	40.0
Act Effct Green (s)	73.4	61.3	61.3	69.5	59.3		19.3	19.3	19.3	31.3	31.3	31.3
Actuated g/C Ratio	0.64	0.53	0.53	0.61	0.52		0.17	0.17	0.17	0.27	0.27	0.27
v/c Ratio	0.80	0.28	0.09	0.42	0.86		0.72	0.46	0.33	0.46	0.72	0.93
Control Delay	50.3	16.1	3.6	11.3	31.8		74.8	47.7	9.8	38.1	46.7	50.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	16.1	3.6	11.3	31.8		74.8	47.7	9.8	38.1	46.7	50.1
LOS	D	B	A	B	C		E	D	A	D	D	D
Approach Delay		23.4			29.1			42.2			47.3	
Approach LOS		C			C			D			D	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 114.8			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 33.8		Intersection LOS: C	
Intersection Capacity Utilization 86.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 8: US 278 (US 78) & Oakdale Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3496		1770	1863	1583	1770	1863	1583
Flt Permitted	0.07	1.00	1.00	0.42	1.00		0.39	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	122	3539	1583	791	3496		724	1863	1583	793	1863	1583
Volume (vph)	187	489	72	220	1319	115	80	133	100	116	339	498
Peak-hour factor, PHF	0.92	0.92	0.90	0.92	0.92	0.90	0.85	0.92	0.84	0.84	0.92	0.94
Adj. Flow (vph)	203	532	80	239	1434	128	94	145	119	138	368	530
RTOR Reduction (vph)	0	0	37	0	5	0	0	0	99	0	0	138
Lane Group Flow (vph)	203	532	43	239	1557	0	94	145	20	138	368	392
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)	73.5	61.3	61.3	69.5	59.3		19.3	19.3	19.3	31.3	31.3	31.3
Effective Green, g (s)	73.5	61.3	61.3	69.5	59.3		19.3	19.3	19.3	31.3	31.3	31.3
Actuated g/C Ratio	0.64	0.53	0.53	0.61	0.52		0.17	0.17	0.17	0.27	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	253	1890	845	566	1806		122	313	266	284	508	432
v/s Ratio Prot	c0.09	0.15		0.04	c0.45			0.08		0.03	0.20	
v/s Ratio Perm	0.43		0.03	0.22			0.13		0.01	0.10		c0.25
v/c Ratio	0.80	0.28	0.05	0.42	0.86		0.77	0.46	0.08	0.49	0.72	0.91
Uniform Delay, d1	32.4	14.7	12.8	10.4	24.2		45.6	43.1	40.2	33.3	37.8	40.3
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	16.6	0.4	0.1	0.5	5.7		25.4	1.1	0.1	1.3	5.1	22.3
Delay (s)	49.0	15.0	12.9	10.9	29.9		71.0	44.2	40.4	34.6	42.9	62.6
Level of Service	D	B	B	B	C		E	D	D	C	D	E
Approach Delay (s)		23.3			27.4			49.9			51.9	
Approach LOS		C			C			D			D	

Intersection Summary					
HCM Average Control Delay	34.9	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.90				
Actuated Cycle Length (s)	114.8	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	86.1%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1617	0	0	0	1611	1770	5085	1583	0	5065	0
Flt Permitted		0.998					0.950					
Satd. Flow (perm)	0	1617	0	0	0	1611	1770	5085	1583	0	5065	0
Volume (vph)	8	0	260	0	0	143	437	1893	128	0	1786	46
Lane Group Flow (vph)	0	298	0	0	0	170	465	1932	144	0	1935	0
Sign Control		Stop			Yield			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

Intersection has too many lanes per leg.
HCM All-Way analysis is limited to two lanes per leg.
Channelized right turn lanes are not counted.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1863	1583	1770	1863	0	0	1752	0	0	1611	0
Flt Permitted				0.950				0.959				
Satd. Flow (perm)	0	1863	1583	1770	1863	0	0	1752	0	0	1611	0
Volume (vph)	0	229	82	20	604	0	75	0	15	0	0	3
Lane Group Flow (vph)	0	283	164	29	636	0	0	124	0	0	8	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	229	82	20	604	0	75	0	15	0	0	3
Peak Hour Factor	0.92	0.81	0.50	0.70	0.95	0.92	0.70	0.92	0.88	0.92	0.92	0.38
Hourly flow rate (vph)	0	283	164	29	636	0	107	0	17	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	636			447			984	976	283	993	1140	636
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	636			447			984	976	283	993	1140	636
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			51	100	98	100	100	98
cM capacity (veh/h)	948			1114			220	245	756	215	196	478

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	283	164	29	636	124	8
Volume Left	0	0	29	0	107	0
Volume Right	0	164	0	0	17	8
cSH	948	1700	1114	1700	243	478
Volume to Capacity	0.00	0.10	0.03	0.37	0.51	0.02
Queue Length 95th (ft)	0	0	2	0	66	1
Control Delay (s)	0.0	0.0	8.3	0.0	34.3	12.7
Lane LOS			A		D	B
Approach Delay (s)	0.0		0.4		34.3	12.7
Approach LOS					D	B

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	50.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	1770	1863	1756	0
Flt Permitted			0.950		0.958	
Satd. Flow (perm)	1863	1583	1770	1863	1756	0
Volume (vph)	297	82	20	664	108	15
Lane Group Flow (vph)	323	89	22	722	133	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	297	82	20	664	108	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	323	89	22	722	117	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	848					
pX, platoon unblocked						
vC, conflicting volume			412		1088	323
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			412		1088	323
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		50	98
cM capacity (veh/h)			1147		234	718

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	323	89	22	722	134
Volume Left	0	0	22	0	117
Volume Right	0	89	0	0	16
cSH	1700	1700	1147	1700	255
Volume to Capacity	0.19	0.05	0.02	0.42	0.52
Queue Length 95th (ft)	0	0	1	0	70
Control Delay (s)	0.0	0.0	8.2	0.0	33.6
Lane LOS			A		D
Approach Delay (s)	0.0		0.2		33.6
Approach LOS					D

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	48.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	0	1859	1736	0
Flt Permitted				0.998	0.963	
Satd. Flow (perm)	1863	1583	0	1859	1736	0
Volume (vph)	169	76	25	559	66	20
Lane Group Flow (vph)	184	83	0	635	94	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	169	76	25	559	66	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	184	83	27	608	72	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			266		846	184
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			266		846	184
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		78	97
cM capacity (veh/h)			1298		326	859

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	184	83	635	93
Volume Left	0	0	27	72
Volume Right	0	83	0	22
cSH	1700	1700	1298	381
Volume to Capacity	0.11	0.05	0.02	0.25
Queue Length 95th (ft)	0	0	2	24
Control Delay (s)	0.0	0.0	0.6	17.5
Lane LOS			A	C
Approach Delay (s)	0.0		0.6	17.5
Approach LOS				C

Intersection Summary				
Average Delay		2.0		
Intersection Capacity Utilization	54.6%	ICU Level of Service		A
Analysis Period (min)	15			

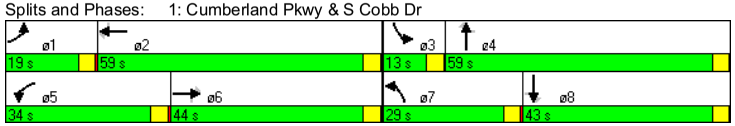
Future 2009 PM Improved

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			176			48			68			82
Volume (vph)	177	907	156	205	2033	129	586	1228	174	207	954	98
Lane Group Flow (vph)	203	945	184	228	2140	143	637	1364	212	233	984	124
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	19.0	44.0	43.0	34.0	59.0	59.0	29.0	59.0	44.0	13.0	43.0	59.0
Act Effct Green (s)	15.0	46.7	39.0	23.3	55.0	55.0	25.0	55.0	46.7	9.0	39.0	55.0
Actuated g/C Ratio	0.10	0.31	0.26	0.16	0.37	0.37	0.17	0.37	0.31	0.06	0.26	0.37
v/c Ratio	1.15	0.60	0.34	0.83	1.15	0.23	1.11	1.05	0.39	1.13	1.07	0.20
Control Delay	169.9	46.4	8.5	85.2	115.9	22.6	128.3	85.0	30.7	162.8	101.9	12.9
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	169.9	46.4	8.5	85.2	115.9	22.6	128.3	85.0	30.7	162.8	101.9	12.9
LOS	F	D	A	F	F	C	F	F	C	F	F	B
Approach Delay		60.0			107.8			92.3			104.3	
Approach LOS		E			F			F			F	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 93.9 Intersection LOS: F
Intersection Capacity Utilization 105.5% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	177	907	156	205	2033	129	586	1228	174	207	954	98
Peak-hour factor, PHF	0.87	0.96	0.85	0.90	0.95	0.90	0.92	0.90	0.82	0.89	0.97	0.79
Adj. Flow (vph)	203	945	184	228	2140	143	637	1364	212	233	984	124
RTOR Reduction (vph)	0	0	130	0	0	30	0	0	47	0	0	52
Lane Group Flow (vph)	203	945	54	228	2140	113	637	1364	165	233	984	72
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	15.0	46.7	39.0	23.3	55.0	55.0	25.0	55.0	46.7	9.0	39.0	55.0
Effective Green, g (s)	15.0	46.7	39.0	23.3	55.0	55.0	25.0	55.0	46.7	9.0	39.0	55.0
Actuated g/C Ratio	0.10	0.31	0.26	0.16	0.37	0.37	0.17	0.37	0.31	0.06	0.26	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	177	1583	412	275	1865	580	572	1298	493	206	920	580
v/s Ratio Prot	c0.11	0.19		0.13	c0.42		c0.19	c0.39		0.07	0.28	
v/s Ratio Perm			0.03			0.07			0.10			0.05
v/c Ratio	1.15	0.60	0.13	0.83	1.15	0.19	1.11	1.05	0.34	1.13	1.07	0.12
Uniform Delay, d1	67.5	43.7	42.5	61.4	47.5	32.4	62.5	47.5	39.7	70.5	55.5	31.5
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	112.7	1.7	0.1	18.3	73.2	0.2	72.8	39.5	1.8	102.4	50.1	0.4
Delay (s)	180.2	45.4	42.7	79.7	120.7	32.6	135.3	87.0	41.5	172.9	105.6	32.0
Level of Service	F	D	D	E	F	C	F	F	D	F	F	C
Approach Delay (s)		65.5			111.9			96.5			110.5	
Approach LOS		E			F			F			F	

Intersection Summary

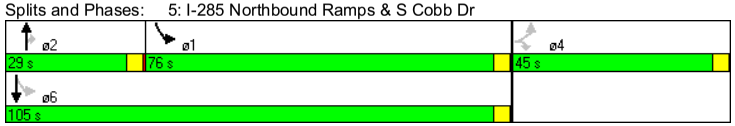
HCM Average Control Delay	98.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.138		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	257	3539	0
Satd. Flow (RTOR)			91						228			
Volume (vph)	921	0	80	0	0	0	0	518	281	862	720	0
Lane Group Flow (vph)	940	0	94	0	0	0	0	557	331	917	774	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Total Split (s)	45.0	0.0	45.0	0.0	0.0	0.0	0.0	29.0	29.0	76.0	105.0	0.0
Act Effct Green (s)	41.0		41.0					25.0	25.0	101.0	101.0	
Actuated g/C Ratio	0.27		0.27					0.17	0.17	0.67	0.67	
v/c Ratio	1.00		0.19					0.94	0.73	1.02	0.32	
Control Delay	83.7		9.1					86.9	28.6	70.3	7.8	
Queue Delay	0.0		0.0					0.0	0.0	34.9	0.8	
Total Delay	83.7		9.1					86.9	28.6	105.2	8.6	
LOS	F		A					F	C	F	A	
Approach Delay								65.2			61.0	
Approach LOS								E			E	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay: 66.6		Intersection LOS: E	
Intersection Capacity Utilization 138.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97		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)	3433		1583					3539	1583	1770	3539	
Flt Permitted	0.95		1.00					1.00	1.00	0.14	1.00	
Satd. Flow (perm)	3433		1583					3539	1583	257	3539	
Volume (vph)	921	0	80	0	0	0	0	518	281	862	720	0
Peak-hour factor, PHF	0.98	0.92	0.85	0.92	0.92	0.92	0.92	0.93	0.85	0.94	0.93	0.92
Adj. Flow (vph)	940	0	94	0	0	0	0	557	331	917	774	0
RTOR Reduction (vph)	0	0	66	0	0	0	0	0	190	0	0	0
Lane Group Flow (vph)	940	0	28	0	0	0	0	557	141	917	774	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Actuated Green, G (s)	41.0		41.0					25.0	25.0	101.0	101.0	
Effective Green, g (s)	41.0		41.0					25.0	25.0	101.0	101.0	
Actuated g/C Ratio	0.27		0.27					0.17	0.17	0.67	0.67	
Clearance Time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	938		433					590	264	899	2383	
v/s Ratio Prot								0.16		c0.49	0.22	
v/s Ratio Perm	c0.27		0.02						0.09	c0.20		
v/c Ratio	1.00		0.06					0.94	0.53	1.02	0.32	
Uniform Delay, d1	54.5		40.3					61.8	57.2	34.8	10.2	
Progression Factor	1.00		1.00					1.00	1.00	1.16	0.73	
Incremental Delay, d2	29.9		0.1					25.6	7.5	29.5	0.2	
Delay (s)	84.4		40.4					87.4	64.7	69.9	7.8	
Level of Service	F		D					F	E	E	A	
Approach Delay (s)		80.4			0.0			78.9			41.5	
Approach LOS		F			A			E			D	

Intersection Summary					
HCM Average Control Delay	61.8	HCM Level of Service		E	
HCM Volume to Capacity ratio	1.00				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	138.3%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1814	0	0	1837	0	0	1767	0	0	1777	1583
Flt Permitted		0.976						0.983			0.954	
Satd. Flow (perm)	0	1814	0	0	1837	0	0	1767	0	0	1777	1583
Volume (vph)	99	112	1	0	348	36	8	10	6	110	2	185
Lane Group Flow (vph)	0	242	0	0	416	0	0	46	0	0	126	223
Sign Control		Free			Free			Stop			Stop	

Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization	54.8%		ICU Level of Service	A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	99	112	1	0	348	36	8	10	6	110	2	185
Peak Hour Factor	0.84	0.93	0.25	0.92	0.93	0.85	0.50	0.56	0.50	0.90	0.50	0.83
Hourly flow rate (vph)	118	120	4	0	374	42	16	18	12	122	4	223
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												6
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	374			124			867	732	122	774	756	395
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374			124			867	732	122	774	756	395
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			100			90	94	99	56	99	66
cM capacity (veh/h)	1184			1462			165	313	929	275	304	654

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	242	417	46	349
Volume Left	118	0	16	122
Volume Right	4	42	12	223
cSH	1184	1462	275	764
Volume to Capacity	0.10	0.00	0.17	0.46
Queue Length 95th (ft)	8	0	15	60
Control Delay (s)	4.5	0.0	20.7	18.8
Lane LOS	A		C	C
Approach Delay (s)	4.5	0.0	20.7	18.8
Approach LOS			C	C

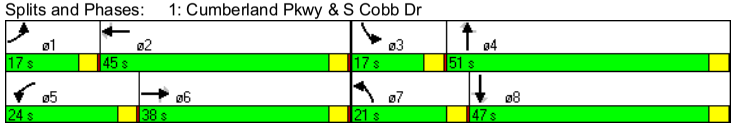
Intersection Summary				
Average Delay		8.2		
Intersection Capacity Utilization	54.8%		ICU Level of Service	A
Analysis Period (min)	15			

Future 2009 SAT

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			307			90			103			96
Volume (vph)	136	843	292	221	854	149	388	1008	200	249	1019	125
Lane Group Flow (vph)	162	878	336	257	1005	157	417	1072	222	277	1073	149
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	17.0	38.0	47.0	24.0	45.0	51.0	21.0	51.0	38.0	17.0	47.0	45.0
Act Effct Green (s)	13.0	34.1	41.9	19.9	41.0	46.2	17.0	46.2	34.1	12.7	41.9	41.0
Actuated g/C Ratio	0.10	0.26	0.33	0.15	0.32	0.36	0.13	0.36	0.26	0.10	0.33	0.32
v/c Ratio	0.91	0.94	0.47	0.94	0.89	0.25	0.92	0.85	0.45	0.82	0.93	0.26
Control Delay	104.2	64.2	7.2	95.7	53.2	13.9	82.0	45.6	24.2	76.7	57.0	14.0
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	104.2	64.2	7.2	95.7	53.2	13.9	82.0	45.6	24.2	76.7	57.0	14.0
LOS	F	E	A	F	D	B	F	D	C	E	E	B
Approach Delay		55.0			56.6			51.7			56.4	
Approach LOS		E			E			D			E	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 128.9			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 54.8		Intersection LOS: D	
Intersection Capacity Utilization 88.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



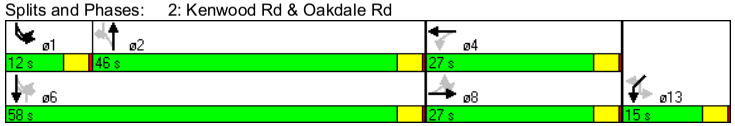
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	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)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	136	843	292	221	854	149	388	1008	200	249	1019	125
Peak-hour factor, PHF	0.84	0.96	0.87	0.86	0.85	0.95	0.93	0.94	0.90	0.90	0.95	0.84
Adj. Flow (vph)	162	878	336	257	1005	157	417	1072	222	277	1073	149
RTOR Reduction (vph)	0	0	207	0	0	58	0	0	76	0	0	65
Lane Group Flow (vph)	162	878	129	257	1005	99	417	1072	146	277	1073	84
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	13.0	34.1	41.9	19.9	41.0	46.2	17.0	46.2	34.1	12.7	41.9	41.0
Effective Green, g (s)	13.0	34.1	41.9	19.9	41.0	46.2	17.0	46.2	34.1	12.7	41.9	41.0
Actuated g/C Ratio	0.10	0.26	0.33	0.15	0.32	0.36	0.13	0.36	0.26	0.10	0.33	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	179	936	515	273	1126	567	453	1268	419	338	1150	504
v/s Ratio Prot	0.09	0.25		c0.15	c0.28		c0.12	0.30		0.08	c0.30	
v/s Ratio Perm			0.08			0.06			0.09			0.05
v/c Ratio	0.91	0.94	0.25	0.94	0.89	0.18	0.92	0.85	0.35	0.82	0.93	0.17
Uniform Delay, d1	57.3	46.4	32.0	53.9	41.9	28.3	55.3	38.1	38.4	57.0	42.1	31.6
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	41.1	17.8	0.3	38.8	10.8	0.1	24.0	5.4	2.3	14.3	13.4	0.7
Delay (s)	98.4	64.1	32.2	92.7	52.7	28.5	79.3	43.4	40.7	71.3	55.5	32.3
Level of Service	F	E	C	F	D	C	E	D	D	E	E	C
Approach Delay (s)		60.4			57.3			51.8			56.1	
Approach LOS		E			E			D			E	

Intersection Summary					
HCM Average Control Delay	56.1	HCM Level of Service		E	
HCM Volume to Capacity ratio	0.91				
Actuated Cycle Length (s)	128.9	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	88.1%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	1712	0	1770	1615	0	0	1770	5070	0	1583
Flt Permitted			0.718		0.563				0.116			
Satd. Flow (perm)	0	0	1253	0	1049	1615	0	0	216	5070	0	1583
Satd. Flow (RTOR)			40			3						197
Volume (vph)	54	6	24	73	244	20	139	11	99	1391	27	226
Lane Group Flow (vph)	0	0	181	0	274	190	0	0	102	1462	0	233
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Total Split (s)	27.0	27.0	27.0	0.0	27.0	27.0	0.0	0.0	46.0	46.0	0.0	58.0
Act Effct Green (s)			23.0		23.0	23.0			42.0	42.0		54.0
Actuated g/C Ratio			0.23		0.23	0.23			0.42	0.42		0.54
v/c Ratio			0.57		1.14	0.51			1.12	0.69		0.25
Control Delay			34.2		137.0	38.6			92.3	9.2		0.4
Queue Delay			0.0		0.0	0.0			0.0	0.1		0.0
Total Delay			34.2		137.0	38.6			92.3	9.3		0.4
LOS			C		F	D			F	A		A
Approach Delay			34.2			96.7				12.9		
Approach LOS			C			F				B		

Intersection Summary		
Cycle Length: 100		
Actuated Cycle Length: 100		
Offset: 19 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.14		
Intersection Signal Delay: 26.6	Intersection LOS: C	
Intersection Capacity Utilization 81.2%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 2: Kenwood Rd & Oakdale Rd



Lane Group	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	1770	5085	1583	0	1770	1583	0
Flt Permitted		0.087				0.950		
Satd. Flow (perm)	0	162	5085	1583	0	1770	1583	0
Satd. Flow (RTOR)				49			13	
Volume (vph)	10	167	1544	46	13	71	4	12
Lane Group Flow (vph)	0	189	1643	49	0	90	17	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Total Split (s)	12.0	12.0	58.0	46.0	15.0	15.0	15.0	0.0
Act Effct Green (s)		54.0	54.0	42.0		11.0	11.0	
Actuated g/C Ratio		0.54	0.54	0.42		0.11	0.11	
v/c Ratio		0.88	0.60	0.07		0.46	0.09	
Control Delay		57.3	16.8	5.5		50.1	23.9	
Queue Delay		0.0	0.0	0.0		0.0	0.0	
Total Delay		57.3	16.8	5.5		50.1	23.9	
LOS		E	B	A		D	C	
Approach Delay			20.6			45.9		
Approach LOS			C			D		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Lane Util. Factor			1.00		1.00	1.00			1.00	0.91		1.00
Frt			0.94		1.00	0.87			1.00	1.00		0.85
Flt Protected			0.98		0.95	1.00			0.95	1.00		1.00
Satd. Flow (prot)			1713		1770	1616			1770	5071		1583
Flt Permitted			0.72		0.56	1.00			0.12	1.00		1.00
Satd. Flow (perm)			1254		1048	1616			215	5071		1583
Volume (vph)	54	6	24	73	244	20	139	11	99	1391	27	226
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.89	0.89	0.89	0.89	0.97	0.97	0.97	0.97
Adj. Flow (vph)	62	7	28	84	274	22	156	12	102	1434	28	233
RTOR Reduction (vph)	0	0	31	0	0	2	0	0	0	0	0	91
Lane Group Flow (vph)	0	0	150	0	274	188	0	0	102	1462	0	142
Turn Type	Perm	Perm			Perm				Perm			custom
Protected Phases			8			4				2		
Permitted Phases	8	8			4				2			6
Actuated Green, G (s)			23.0		23.0	23.0			42.0	42.0		54.0
Effective Green, g (s)			23.0		23.0	23.0			42.0	42.0		54.0
Actuated g/C Ratio			0.23		0.23	0.23			0.42	0.42		0.54
Clearance Time (s)			4.0		4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)			3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)			288		241	372			90	2130		855
v/s Ratio Prot						0.12				0.29		
v/s Ratio Perm			0.12		c0.26				c0.47			0.09
v/c Ratio			0.52		1.14	0.50			1.13	0.69		0.17
Uniform Delay, d1			33.7		38.5	33.5			29.0	23.6		11.6
Progression Factor			1.00		1.00	1.00			0.54	0.38		0.12
Incremental Delay, d2			1.7		99.9	1.1			72.6	0.2		0.0
Delay (s)			35.4		138.4	34.6			88.4	9.1		1.4
Level of Service			D		F	C			F	A		A
Approach Delay (s)			35.4			95.9				12.6		
Approach LOS			D			F				B		

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

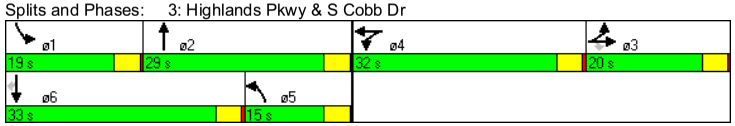
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91	1.00		1.00	1.00	
Frt		1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5085	1583		1770	1583	
Flt Permitted		0.09	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		162	5085	1583		1770	1583	
Volume (vph)	10	167	1544	46	13	71	4	12
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	178	1643	49	14	76	4	13
RTOR Reduction (vph)	0	0	0	28	0	0	12	0
Lane Group Flow (vph)	0	189	1643	21	0	90	5	0
Turn Type	pm+pt	pm+pt		custom	Perm		Perm	
Protected Phases	1	1	6			13		
Permitted Phases	6	6		2	13		13	
Actuated Green, G (s)		54.0	54.0	42.0		11.0	11.0	
Effective Green, g (s)		54.0	54.0	42.0		11.0	11.0	
Actuated g/C Ratio		0.54	0.54	0.42		0.11	0.11	
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		216	2746	665		195	174	
v/s Ratio Prot		c0.07	0.32					
v/s Ratio Perm		0.40		0.01		0.05	0.00	
v/c Ratio		0.88	0.60	0.03		0.46	0.03	
Uniform Delay, d1		21.6	15.6	17.0		41.7	39.7	
Progression Factor		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		30.1	1.0	0.1		7.7	0.3	
Delay (s)		51.7	16.6	17.1		49.4	40.1	
Level of Service		D	B	B		D	D	
Approach Delay (s)			20.1			47.9		
Approach LOS			C			D		

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1736	1583	0	1747	0	3433	4943	0	1770	5085	1583
Flt Permitted	0.950	0.981			0.971		0.950			0.950		
Satd. Flow (perm)	1681	1736	1583	0	1747	0	3433	4943	0	1770	5085	1583
Satd. Flow (RTOR)			241		17			49				121
Volume (vph)	311	109	274	381	88	173	315	1249	252	284	1301	320
Lane Group Flow (vph)	243	255	285	0	771	0	342	1581	0	379	1328	340
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Total Split (s)	20.0	20.0	20.0	32.0	32.0	0.0	15.0	29.0	0.0	19.0	33.0	33.0
Act Effct Green (s)	16.0	16.0	16.0		28.0		11.0	25.0		15.0	29.0	29.0
Actuated g/C Ratio	0.16	0.16	0.16		0.28		0.11	0.25		0.15	0.29	0.29
v/c Ratio	0.91	0.92	0.63		1.54		0.90	1.24		1.42	0.90	0.62
Control Delay	78.0	79.8	15.0		280.7		63.2	143.9		241.9	31.7	15.9
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	78.0	79.8	15.0		280.7		63.2	143.9		241.9	31.7	15.9
LOS	E	E	B		F		E	F		F	C	B
Approach Delay		55.7			280.7			129.6			68.0	
Approach LOS		E			F			F			E	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 28 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.54			
Intersection Signal Delay: 117.4		Intersection LOS: F	
Intersection Capacity Utilization 98.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



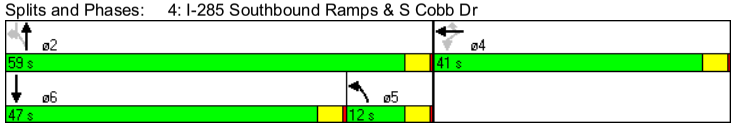
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		0.97	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1736	1583		1746		3433	4944		1770	5085	1583
Flt Permitted	0.95	0.98	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1736	1583		1746		3433	4944		1770	5085	1583
Volume (vph)	311	109	274	381	88	173	315	1249	252	284	1301	320
Peak-hour factor, PHF	0.91	0.70	0.96	0.82	0.81	0.88	0.92	0.97	0.86	0.75	0.98	0.94
Adj. Flow (vph)	342	156	285	465	109	197	342	1288	293	379	1328	340
RTOR Reduction (vph)	0	0	202	0	12	0	0	37	0	0	0	86
Lane Group Flow (vph)	243	255	83	0	759	0	342	1544	0	379	1328	254
Turn Type	Split		Perm	Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	16.0	16.0	16.0		28.0		11.0	25.0		15.0	29.0	29.0
Effective Green, g (s)	16.0	16.0	16.0		28.0		11.0	25.0		15.0	29.0	29.0
Actuated g/C Ratio	0.16	0.16	0.16		0.28		0.11	0.25		0.15	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	269	278	253		489		378	1236		266	1475	459
v/s Ratio Prot	0.14	c0.15			c0.43		0.10	c0.31		c0.21	0.26	
v/s Ratio Perm			0.05									0.16
v/c Ratio	0.90	0.92	0.33		1.55		0.90	1.25		1.42	0.90	0.55
Uniform Delay, d1	41.2	41.3	37.2		36.0		44.0	37.5		42.5	34.1	30.0
Progression Factor	1.00	1.00	1.00		1.00		0.91	0.88		1.14	0.70	0.60
Incremental Delay, d2	30.8	32.7	0.8		258.2		19.3	117.4		206.7	7.1	3.5
Delay (s)	72.0	74.1	38.0		294.2		59.1	150.3		255.3	31.1	21.6
Level of Service	E	E	D		F		E	F		F	C	C
Approach Delay (s)		60.3			294.2			134.1			71.0	
Approach LOS		E			F			F			E	

Intersection Summary					
HCM Average Control Delay	122.6	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.32				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	98.4%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	0	0	1681	1441	1504	1770	3539	0	0	3539	1583
Flt Permitted				0.950			0.085					
Satd. Flow (perm)	0	0	0	1681	1441	1504	158	3539	0	0	3539	1583
Satd. Flow (RTOR)					48	48						775
Volume (vph)	0	0	0	251	0	925	63	1218	0	0	1312	736
Lane Group Flow (vph)	0	0	0	310	508	508	77	1282	0	0	1353	775
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Total Split (s)	0.0	0.0	0.0	41.0	41.0	41.0	12.0	59.0	0.0	0.0	47.0	59.0
Act Effct Green (s)				35.3	35.3	35.3	56.7	56.7			47.1	56.7
Actuated g/C Ratio				0.35	0.35	0.35	0.57	0.57			0.47	0.57
v/c Ratio				0.52	0.94	0.90	0.36	0.64			0.81	0.63
Control Delay				28.9	55.6	48.7	10.1	1.5			15.4	2.9
Queue Delay				0.1	0.0	0.0	0.0	1.2			0.4	0.0
Total Delay				29.0	55.6	48.7	10.1	2.7			15.7	2.9
LOS				C	E	D	B	A			B	A
Approach Delay					46.7			3.1			11.1	
Approach LOS					D			A			B	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 11 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 110.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: I-285 Southbound Ramps & S Cobb Dr



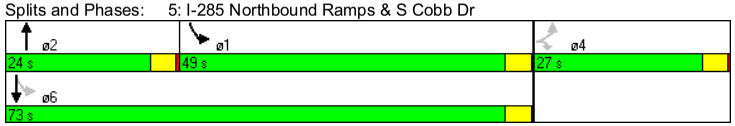
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.91	0.95	1.00	0.95			0.95	1.00
Frt				1.00	0.85	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1441	1504	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)				1681	1441	1504	148	3539			3539	1583
Volume (vph)	0	0	0	251	0	925	63	1218	0	0	1312	736
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.92	0.91	0.82	0.95	0.92	0.92	0.97	0.95
Adj. Flow (vph)	0	0	0	310	0	1016	77	1282	0	0	1353	775
RTOR Reduction (vph)	0	0	0	0	31	31	0	0	0	0	0	336
Lane Group Flow (vph)	0	0	0	310	477	477	77	1282	0	0	1353	439
Turn Type				Perm		Perm	pm+pt					custom
Protected Phases					4		5	2			6	
Permitted Phases				4		4	2					2
Actuated Green, G (s)				35.3	35.3	35.3	56.7	56.7			46.3	56.7
Effective Green, g (s)				35.3	35.3	35.3	56.7	56.7			46.3	56.7
Actuated g/C Ratio				0.35	0.35	0.35	0.57	0.57			0.46	0.57
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				593	509	531	188	2007			1639	898
v/s Ratio Prot							0.03	c0.36			c0.38	
v/s Ratio Perm				0.18	0.33	0.32	0.21					0.28
v/c Ratio				0.52	0.94	0.90	0.41	0.64			0.83	0.49
Uniform Delay, d1				25.7	31.3	30.6	34.6	14.7			23.3	13.0
Progression Factor				1.00	1.00	1.00	0.39	0.09			0.52	1.80
Incremental Delay, d2				0.8	24.9	17.8	0.1	0.1			2.1	0.8
Delay (s)				26.5	56.2	48.4	13.7	1.5			14.3	24.2
Level of Service				C	E	D	B	A			B	C
Approach Delay (s)		0.0			46.3			2.2			17.9	
Approach LOS		A			D			A			B	

Intersection Summary					
HCM Average Control Delay	21.3	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	110.3%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3327	0	1770	3539	0
Flt Permitted	0.950									0.167		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3327	0	311	3539	0
Satd. Flow (RTOR)			64					138				
Volume (vph)	811	0	56	0	0	0	0	459	297	992	623	0
Lane Group Flow (vph)	882	0	64	0	0	0	0	820	0	1033	663	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Total Split (s)	27.0	0.0	27.0	0.0	0.0	0.0	0.0	24.0	0.0	49.0	73.0	0.0
Act Effct Green (s)	23.0		23.0					20.0		69.0	69.0	
Actuated g/C Ratio	0.23		0.23					0.20		0.69	0.69	
v/c Ratio	1.12		0.15					1.06		1.19	0.27	
Control Delay	105.8		9.1					81.5		120.3	4.2	
Queue Delay	0.0		0.0					0.0		0.0	0.0	
Total Delay	105.8		9.1					81.5		120.3	4.2	
LOS	F		A					F		F	A	
Approach Delay								81.5			74.9	
Approach LOS								F			E	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 32 (32%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 83.1		Intersection LOS: F	
Intersection Capacity Utilization 110.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0		4.0	4.0	
Lane Util. Factor	0.97		1.00					0.95		1.00	0.95	
Frt	1.00		0.85					0.94		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433		1583					3328		1770	3539	
Flt Permitted	0.95		1.00					1.00		0.17	1.00	
Satd. Flow (perm)	3433		1583					3328		310	3539	
Volume (vph)	811	0	56	0	0	0	0	459	297	992	623	0
Peak-hour factor, PHF	0.92	0.92	0.88	0.92	0.92	0.92	0.92	0.93	0.91	0.96	0.94	0.92
Adj. Flow (vph)	882	0	64	0	0	0	0	494	326	1033	663	0
RTOR Reduction (vph)	0	0	49	0	0	0	0	110	0	0	0	0
Lane Group Flow (vph)	882	0	15	0	0	0	0	710	0	1033	663	0
Turn Type	custom		custom							pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	23.0		23.0					20.0		69.0	69.0	
Effective Green, g (s)	23.0		23.0					20.0		69.0	69.0	
Actuated g/C Ratio	0.23		0.23					0.20		0.69	0.69	
Clearance Time (s)	4.0		4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	790		364					666		871	2442	
v/s Ratio Prot								0.21		c0.53	0.19	
v/s Ratio Perm	c0.26		0.01							c0.28		
v/c Ratio	1.12		0.04					1.07		1.19	0.27	
Uniform Delay, d1	38.5		29.9					40.0		24.5	5.9	
Progression Factor	1.00		1.00					1.00		1.19	0.68	
Incremental Delay, d2	69.0		0.0					53.6		91.5	0.2	
Delay (s)	107.5		30.0					93.6		120.7	4.2	
Level of Service	F		C					F		F	A	
Approach Delay (s)		102.3			0.0			93.6			75.1	
Approach LOS		F			A			F			E	

Intersection Summary					
HCM Average Control Delay	86.9	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.14				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	110.3%	ICU Level of Service		H	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1807	0	0	1788	0	0	1736	0	0	1666	0
Flt Permitted		0.973									0.984	
Satd. Flow (perm)	0	1807	0	0	1788	0	0	1736	0	0	1666	0
Volume (vph)	69	72	1	0	75	37	0	1	1	40	0	84
Lane Group Flow (vph)	0	186	0	0	142	0	0	8	0	0	157	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	69	72	1	0	75	37	0	1	1	40	0	84
Peak Hour Factor	0.66	0.94	0.25	0.92	0.75	0.88	0.92	0.25	0.25	0.79	0.92	0.79
Hourly flow rate (vph)	105	77	4	0	100	42	0	4	4	51	0	106
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	100				81			515	388	79	415	411	121
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	100				81			515	388	79	415	411	121
tC, single (s)	4.1				4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93				100			100	99	100	90	100	89
cM capacity (veh/h)	1493				1517			394	509	982	514	494	930

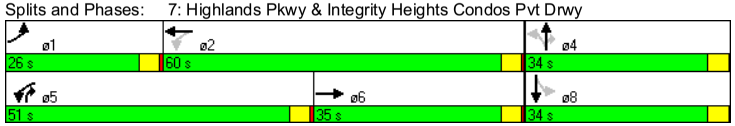
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	142	8	157
Volume Left	105	0	0	51
Volume Right	4	42	4	106
cSH	1493	1517	670	737
Volume to Capacity	0.07	0.00	0.01	0.21
Queue Length 95th (ft)	6	0	1	20
Control Delay (s)	4.5	0.0	10.4	11.2
Lane LOS	A		B	B
Approach Delay (s)	4.5	0.0	10.4	11.2
Approach LOS			B	B

Intersection Summary				
Average Delay		5.4		
Intersection Capacity Utilization		35.1%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3447	0	1770	3532	0	1770	1863	1583	0	1863	0
Flt Permitted	0.950			0.414			0.755					
Satd. Flow (perm)	1770	3447	0	771	3532	0	1406	1863	1583	0	1863	0
Satd. Flow (RTOR)		19			2				290			
Volume (vph)	1	250	43	417	236	1	37	0	417	0	2	0
Lane Group Flow (vph)	4	317	0	434	266	0	46	0	444	0	4	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Total Split (s)	26.0	35.0	0.0	51.0	60.0	0.0	34.0	34.0	51.0	34.0	34.0	0.0
Act Effct Green (s)	5.8	42.9		58.7	58.9		7.9		19.0		7.7	
Actuated g/C Ratio	0.07	0.61		0.84	0.84		0.11		0.27		0.10	
v/c Ratio	0.03	0.15		0.53	0.09		0.31		0.69		0.02	
Control Delay	37.0	7.9		4.6	2.8		37.0		13.0		31.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0		0.0		0.0	
Total Delay	37.0	7.9		4.6	2.8		37.0		13.0		31.0	
LOS	D	A		A	A		D		B		C	
Approach Delay		8.3			3.9						31.0	
Approach LOS		A			A						C	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 70.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 7: Highlands Pkwy & Integrity Heights Condos Pvt Drwy



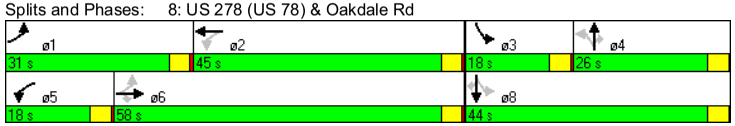
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0		4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00		0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95		1.00		1.00	
Satd. Flow (prot)	1770	3449		1770	3531		1770		1583		1863	
Flt Permitted	0.95	1.00		0.52	1.00		0.78		1.00		1.00	
Satd. Flow (perm)	1770	3449		959	3531		1461		1583		1863	
Volume (vph)	1	250	43	417	236	1	37	0	417	0	2	0
Peak-hour factor, PHF	0.25	0.95	0.79	0.96	0.90	0.25	0.80	0.92	0.94	0.92	0.50	0.92
Adj. Flow (vph)	4	263	54	434	262	4	46	0	444	0	4	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	225	0	0	0
Lane Group Flow (vph)	4	310	0	434	266	0	46	0	219	0	4	0
Turn Type	Prot			pm+pt			Perm		pm+ov	Perm		
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases				2			4		4	8		
Actuated Green, G (s)	1.0	46.3		62.0	57.0		5.1		16.8		5.1	
Effective Green, g (s)	1.0	46.3		62.0	57.0		5.1		16.8		5.1	
Actuated g/C Ratio	0.01	0.62		0.83	0.76		0.07		0.22		0.07	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0		4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	24	2126		918	2680		99		438		127	
v/s Ratio Prot	0.00	0.09		c0.07	0.08				c0.08		0.00	
v/s Ratio Perm				c0.32			0.03		0.06			
v/c Ratio	0.17	0.15		0.47	0.10		0.46		0.50		0.03	
Uniform Delay, d1	36.6	6.1		1.7	2.4		33.7		25.5		32.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00		1.00	
Incremental Delay, d2	3.3	0.0		0.4	0.1		3.4		0.9		0.1	
Delay (s)	39.9	6.1		2.1	2.4		37.1		26.4		32.8	
Level of Service	D	A		A	A		D		C		C	
Approach Delay (s)		6.5			2.2			27.4			32.8	
Approach LOS		A			A			C			C	

Intersection Summary					
HCM Average Control Delay	11.3	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.47				
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	4.0		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	3539	1583	1770	3486	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.171			0.359			0.690			0.507		
Satd. Flow (perm)	319	3539	1583	669	3486	0	1285	1863	1583	944	1863	1583
Satd. Flow (RTOR)			74		10				59			268
Volume (vph)	213	667	65	73	642	68	63	98	56	67	79	241
Lane Group Flow (vph)	239	741	76	85	782	0	81	115	59	82	103	268
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Total Split (s)	31.0	58.0	58.0	18.0	45.0	0.0	26.0	26.0	26.0	18.0	44.0	44.0
Act Effct Green (s)	64.1	55.5	55.5	56.8	49.7		11.4	11.4	11.4	22.0	21.7	21.7
Actuated g/C Ratio	0.68	0.59	0.59	0.59	0.53		0.12	0.12	0.12	0.23	0.23	0.23
v/c Ratio	0.63	0.36	0.08	0.18	0.43		0.52	0.51	0.24	0.28	0.24	0.47
Control Delay	15.8	13.6	3.8	8.3	16.8		54.1	49.5	13.3	31.2	30.4	6.5
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	15.8	13.6	3.8	8.3	16.8		54.1	49.5	13.3	31.2	30.4	6.5
LOS	B	B	A	A	B		D	D	B	C	C	A
Approach Delay		13.4			16.0			42.6			16.4	
Approach LOS		B			B			D			B	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 94.6			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 52.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 8: US 278 (US 78) & Oakdale Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3487		1770	1863	1583	1770	1863	1583
Flt Permitted	0.27	1.00	1.00	0.35	1.00		0.69	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	499	3539	1583	655	3487		1286	1863	1583	794	1863	1583
Volume (vph)	213	667	65	73	642	68	63	98	56	67	79	241
Peak-hour factor, PHF	0.89	0.90	0.85	0.86	0.91	0.88	0.78	0.85	0.95	0.82	0.77	0.90
Adj. Flow (vph)	239	741	76	85	705	77	81	115	59	82	103	268
RTOR Reduction (vph)	0	0	31	0	5	0	0	0	52	0	0	205
Lane Group Flow (vph)	239	741	45	85	777	0	81	115	7	82	103	63
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)	65.6	55.5	55.5	56.9	50.8		11.4	11.4	11.4	22.7	22.7	22.7
Effective Green, g (s)	65.6	55.5	55.5	56.9	50.8		11.4	11.4	11.4	22.7	22.7	22.7
Actuated g/C Ratio	0.68	0.58	0.58	0.59	0.53		0.12	0.12	0.12	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	482	2040	912	458	1839		152	221	187	261	439	373
v/s Ratio Prot	c0.06	0.21		0.01	0.22			0.06		c0.02	0.06	
v/s Ratio Perm	c0.28		0.03	0.10			c0.06		0.00	0.05		0.04
v/c Ratio	0.50	0.36	0.05	0.19	0.42		0.53	0.52	0.04	0.31	0.23	0.17
Uniform Delay, d1	7.1	10.9	8.9	8.5	13.8		39.9	39.9	37.6	29.7	29.8	29.3
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	0.8	0.5	0.1	0.2	0.7		3.6	2.2	0.1	0.7	0.3	0.2
Delay (s)	7.9	11.4	9.0	8.7	14.5		43.5	42.1	37.7	30.4	30.0	29.5
Level of Service	A	B	A	A	B		D	D	D	C	C	C
Approach Delay (s)		10.5			14.0			41.5			29.8	
Approach LOS		B			B			D			C	

Intersection Summary					
HCM Average Control Delay	18.0	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.48				
Actuated Cycle Length (s)	96.3	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1625	0	0	0	1611	1770	5085	1583	0	5080	0
Flt Permitted		0.996					0.950					
Satd. Flow (perm)	0	1625	0	0	0	1611	1770	5085	1583	0	5080	0
Volume (vph)	16	0	221	0	0	186	228	1687	197	0	1994	13
Lane Group Flow (vph)	0	259	0	0	0	232	285	1776	240	0	2094	0
Sign Control		Stop			Yield			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 76.0%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection has too many lanes per leg.
HCM All-Way analysis is limited to two lanes per leg.
Channelized right turn lanes are not counted.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1861	1583	1770	1863	0	0	1736	0	0	1611	0
Flt Permitted		0.999		0.950				0.963				
Satd. Flow (perm)	0	1861	1583	1770	1863	0	0	1736	0	0	1611	0
Volume (vph)	2	215	112	20	189	0	85	0	19	0	0	2
Lane Group Flow (vph)	0	283	149	23	239	0	0	139	0	0	4	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization	35.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	215	112	20	189	0	85	0	19	0	0	2
Peak Hour Factor	0.50	0.77	0.75	0.88	0.79	0.92	0.80	0.92	0.58	0.92	0.92	0.50
Hourly flow rate (vph)	4	279	149	23	239	0	106	0	33	0	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	239			429			576	572	279	605	721	239
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	239			429			576	572	279	605	721	239
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			75	100	96	100	100	99
cM capacity (veh/h)	1328			1131			419	420	760	385	345	800

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	283	149	23	239	139	4
Volume Left	4	0	23	0	106	0
Volume Right	0	149	0	0	33	4
cSH	1328	1700	1131	1700	468	800
Volume to Capacity	0.00	0.09	0.02	0.14	0.30	0.01
Queue Length 95th (ft)	0	0	2	0	31	0
Control Delay (s)	0.1	0.0	8.2	0.0	15.9	9.5
Lane LOS	A		A		C	A
Approach Delay (s)	0.1		0.7		15.9	9.5
Approach LOS					C	A

Intersection Summary					
Average Delay	3.0				
Intersection Capacity Utilization	35.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	1770	1863	1754	0
Flt Permitted			0.950		0.958	
Satd. Flow (perm)	1863	1583	1770	1863	1754	0
Volume (vph)	312	112	20	250	132	19
Lane Group Flow (vph)	339	122	22	272	164	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	312	112	20	250	132	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	339	122	22	272	143	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	848					
pX, platoon unblocked						
vC, conflicting volume			461		654	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			461		654	339
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		66	97
cM capacity (veh/h)			1100		423	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	339	122	22	272	164
Volume Left	0	0	22	0	143
Volume Right	0	122	0	0	21
cSH	1700	1700	1100	1700	445
Volume to Capacity	0.20	0.07	0.02	0.16	0.37
Queue Length 95th (ft)	0	0	2	0	42
Control Delay (s)	0.0	0.0	8.3	0.0	17.7
Lane LOS			A		C
Approach Delay (s)	0.0		0.6		17.7
Approach LOS					C

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	31.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	0	1848	1736	0
Flt Permitted				0.992	0.963	
Satd. Flow (perm)	1863	1583	0	1848	1736	0
Volume (vph)	127	107	26	133	77	24
Lane Group Flow (vph)	138	116	0	173	110	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	127	107	26	133	77	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	138	116	28	145	84	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			254		339	138
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			254		339	138
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		87	97
cM capacity (veh/h)			1311		642	910

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	138	116	173	110
Volume Left	0	0	28	84
Volume Right	0	116	0	26
cSH	1700	1700	1311	691
Volume to Capacity	0.08	0.07	0.02	0.16
Queue Length 95th (ft)	0	0	2	14
Control Delay (s)	0.0	0.0	1.4	11.2
Lane LOS			A	B
Approach Delay (s)	0.0		1.4	11.2
Approach LOS				B

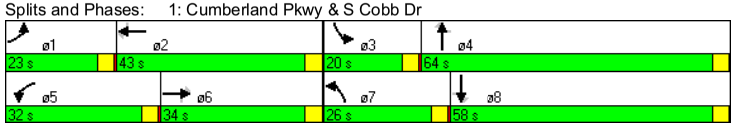
Intersection Summary				
Average Delay		2.7		
Intersection Capacity Utilization	30.9%	ICU Level of Service		A
Analysis Period (min)	15			

Future 2009 SAT Improved

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			336			119			83			77
Volume (vph)	136	843	292	221	854	149	388	1008	200	249	1019	125
Lane Group Flow (vph)	162	878	336	257	1005	157	417	1072	222	277	1073	149
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Total Split (s)	23.0	34.0	58.0	32.0	43.0	64.0	26.0	64.0	34.0	20.0	58.0	43.0
Act Effct Green (s)	16.3	32.1	47.2	23.7	39.5	52.6	20.0	52.6	32.1	14.6	47.2	39.5
Actuated g/C Ratio	0.12	0.23	0.34	0.17	0.28	0.38	0.14	0.38	0.23	0.10	0.34	0.28
v/c Ratio	0.78	0.75	0.44	0.85	0.70	0.23	0.85	0.80	0.52	0.77	0.89	0.30
Control Delay	86.4	56.5	5.1	82.2	49.3	9.4	75.4	43.9	36.4	77.1	54.3	23.0
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	86.4	56.5	5.1	82.2	49.3	9.4	75.4	43.9	36.4	77.1	54.3	23.0
LOS	F	E	A	F	D	A	E	D	D	E	D	C
Approach Delay		47.5			50.8			50.6			55.4	
Approach LOS		D			D			D			E	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 139.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 51.1		Intersection LOS: D	
Intersection Capacity Utilization 81.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Cumberland Pkwy & S Cobb Dr



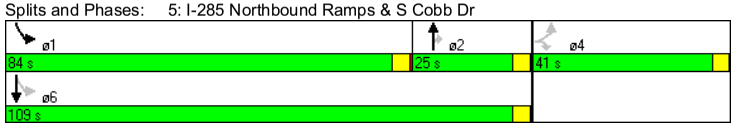
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	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)	1770	5085	1583	1770	5085	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	136	843	292	221	854	149	388	1008	200	249	1019	125
Peak-hour factor, PHF	0.84	0.96	0.87	0.86	0.85	0.95	0.93	0.94	0.90	0.90	0.95	0.84
Adj. Flow (vph)	162	878	336	257	1005	157	417	1072	222	277	1073	149
RTOR Reduction (vph)	0	0	222	0	0	74	0	0	64	0	0	55
Lane Group Flow (vph)	162	878	114	257	1005	83	417	1072	158	277	1073	94
Turn Type	Prot		custom	Prot		custom	Prot		custom	Prot		custom
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	16.3	32.1	47.2	23.7	39.5	52.6	20.0	52.6	32.1	14.6	47.2	39.5
Effective Green, g (s)	16.3	32.1	47.2	23.7	39.5	52.6	20.0	52.6	32.1	14.6	47.2	39.5
Actuated g/C Ratio	0.12	0.23	0.34	0.17	0.28	0.38	0.14	0.38	0.23	0.11	0.34	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	208	1174	538	302	1445	599	494	1339	366	361	1202	450
v/s Ratio Prot	0.09	0.17		c0.15	c0.20		c0.12	0.30		0.08	c0.30	
v/s Ratio Perm			0.07			0.05			0.10			0.06
v/c Ratio	0.78	0.75	0.21	0.85	0.70	0.14	0.84	0.80	0.43	0.77	0.89	0.21
Uniform Delay, d1	59.6	49.7	32.7	55.9	44.4	28.3	58.0	38.5	45.7	60.5	43.5	37.9
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	16.7	4.4	0.2	19.9	2.8	0.1	12.5	3.5	3.7	9.4	8.7	1.1
Delay (s)	76.3	54.1	32.9	75.9	47.2	28.4	70.4	42.1	49.4	70.0	52.2	38.9
Level of Service	E	D	C	E	D	C	E	D	D	E	D	D
Approach Delay (s)		51.5			50.3			49.9			54.2	
Approach LOS		D			D			D			D	

Intersection Summary					
HCM Average Control Delay	51.4	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.81				
Actuated Cycle Length (s)	139.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	81.1%	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												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.160		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	298	3539	0
Satd. Flow (RTOR)			64						245			
Volume (vph)	811	0	56	0	0	0	0	459	297	992	623	0
Lane Group Flow (vph)	882	0	64	0	0	0	0	494	326	1033	663	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Total Split (s)	41.0	0.0	41.0	0.0	0.0	0.0	0.0	25.0	25.0	84.0	109.0	0.0
Act Effct Green (s)	37.0		37.0					21.0	21.0	105.0	105.0	
Actuated g/C Ratio	0.25		0.25					0.14	0.14	0.70	0.70	
v/c Ratio	1.04		0.15					1.00	0.75	1.04	0.27	
Control Delay	96.1		10.4					103.4	28.2	65.6	5.2	
Queue Delay	1.7		0.0					0.0	0.0	43.3	0.3	
Total Delay	97.8		10.4					103.4	28.2	108.8	5.4	
LOS	F		B					F	C	F	A	
Approach Delay								73.5			68.4	
Approach LOS								E			E	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 104 (69%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 76.0		Intersection LOS: E	
Intersection Capacity Utilization 106.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 5: I-285 Northbound Ramps & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97		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)	3433		1583					3539	1583	1770	3539	
Flt Permitted	0.95		1.00					1.00	1.00	0.16	1.00	
Satd. Flow (perm)	3433		1583					3539	1583	298	3539	
Volume (vph)	811	0	56	0	0	0	0	459	297	992	623	0
Peak-hour factor, PHF	0.92	0.92	0.88	0.92	0.92	0.92	0.92	0.93	0.91	0.96	0.94	0.92
Adj. Flow (vph)	882	0	64	0	0	0	0	494	326	1033	663	0
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	211	0	0	0
Lane Group Flow (vph)	882	0	16	0	0	0	0	494	115	1033	663	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Actuated Green, G (s)	37.0		37.0					21.0	21.0	105.0	105.0	
Effective Green, g (s)	37.0		37.0					21.0	21.0	105.0	105.0	
Actuated g/C Ratio	0.25		0.25					0.14	0.14	0.70	0.70	
Clearance Time (s)	4.0		4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	847		390					495	222	994	2477	
v/s Ratio Prot								0.14		c0.55	0.19	
v/s Ratio Perm	c0.26		0.01						0.07	c0.17		
v/c Ratio	1.04		0.04					1.00	0.52	1.04	0.27	
Uniform Delay, d1	56.5		43.0					64.5	59.8	30.7	8.3	
Progression Factor	1.00		1.00					1.00	1.00	1.03	0.59	
Incremental Delay, d2	42.2		0.0					40.0	8.4	34.8	0.2	
Delay (s)	98.7		43.0					104.4	68.3	66.5	5.1	
Level of Service	F		D					F	E	E	A	
Approach Delay (s)		94.9			0.0			90.1			42.5	
Approach LOS		F			A			F			D	

Intersection Summary					
HCM Average Control Delay	68.1	HCM Level of Service		E	
HCM Volume to Capacity ratio	1.03				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	106.5%	ICU Level of Service		G	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Satd. Flow (prot)	0	1807	0	0	1788	0	0	1736	0	0	1770	1583
Flt Permitted		0.973									0.950	
Satd. Flow (perm)	0	1807	0	0	1788	0	0	1736	0	0	1770	1583
Volume (vph)	69	72	1	0	75	37	0	1	1	40	0	84
Lane Group Flow (vph)	0	186	0	0	142	0	0	8	0	0	51	106
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	69	72	1	0	75	37	0	1	1	40	0	84
Peak Hour Factor	0.66	0.94	0.25	0.92	0.75	0.88	0.92	0.25	0.25	0.79	0.92	0.79
Hourly flow rate (vph)	105	77	4	0	100	42	0	4	4	51	0	106
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												6
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	100			81			462	388	79	415	411	121
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	100			81			462	388	79	415	411	121
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	99	100	90	100	89
cM capacity (veh/h)	1493			1517			428	509	982	514	494	930

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	142	8	157
Volume Left	105	0	0	51
Volume Right	4	42	4	106
cSH	1493	1517	670	1373
Volume to Capacity	0.07	0.00	0.01	0.11
Queue Length 95th (ft)	6	0	1	10
Control Delay (s)	4.5	0.0	10.4	10.5
Lane LOS	A		B	B
Approach Delay (s)	4.5	0.0	10.4	10.5
Approach LOS			B	B

Intersection Summary					
Average Delay	5.2				
Intersection Capacity Utilization	29.9%	ICU Level of Service		A	
Analysis Period (min)	15				

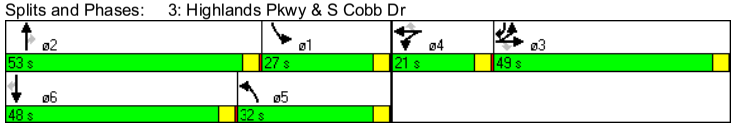
Future Site Access Analysis

Future 2009 PM Site Access Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1709	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.950			0.950		
Satd. Flow (perm)	1681	1709	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Satd. Flow (RTOR)			316			209			88			139
Volume (vph)	680	86	497	277	89	157	520	1416	155	176	1079	561
Lane Group Flow (vph)	413	436	529	322	110	209	559	1460	189	226	1112	616
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	3	3		4	4		5	2		1	6	3
Permitted Phases			3			4			2			6
Total Split (s)	49.0	49.0	49.0	21.0	21.0	21.0	32.0	53.0	53.0	27.0	48.0	49.0
Act Effct Green (s)	42.6	42.6	42.6	16.6	16.6	16.6	27.3	52.5	52.5	22.3	47.5	94.1
Actuated g/C Ratio	0.28	0.28	0.28	0.11	0.11	0.11	0.18	0.35	0.35	0.15	0.32	0.63
v/c Ratio	0.87	0.90	0.78	0.85	0.53	0.58	0.89	0.82	0.31	0.86	0.69	0.59
Control Delay	69.3	73.3	27.8	85.8	73.1	14.3	69.3	48.8	21.4	81.6	33.9	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	2.3	0.0	0.0	0.3	0.3
Total Delay	69.3	73.3	27.8	85.8	73.1	14.4	69.3	51.0	21.4	81.6	34.2	8.0
LOS	E	E	C	F	E	B	E	D	C	F	C	A
Approach Delay		54.6			60.4			53.1			31.4	
Approach LOS		D			E			D			C	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 127 (85%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 47.3		Intersection LOS: D	
Intersection Capacity Utilization 74.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	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	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1709	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1709	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Volume (vph)	680	86	497	277	89	157	520	1416	155	176	1079	561
Peak-hour factor, PHF	0.94	0.68	0.94	0.86	0.81	0.75	0.93	0.97	0.82	0.78	0.97	0.91
Adj. Flow (vph)	723	126	529	322	110	209	559	1460	189	226	1112	616
RTOR Reduction (vph)	0	0	226	0	0	186	0	0	57	0	0	56
Lane Group Flow (vph)	413	436	303	322	110	23	559	1460	132	226	1112	560
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	3	3		4	4		5	2		1	6	3
Permitted Phases			3			4			2			6
Actuated Green, G (s)	42.6	42.6	42.6	16.6	16.6	16.6	27.3	52.5	52.5	22.3	47.5	90.1
Effective Green, g (s)	42.6	42.6	42.6	16.6	16.6	16.6	27.3	52.5	52.5	22.3	47.5	90.1
Actuated g/C Ratio	0.28	0.28	0.28	0.11	0.11	0.11	0.18	0.35	0.35	0.15	0.32	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	477	485	450	380	206	175	625	1780	554	263	1610	993
v/s Ratio Prot	0.25	c0.26		c0.09	0.06		c0.16	c0.29		0.13	0.22	0.16
v/s Ratio Perm			0.19			0.01			0.08			0.19
v/c Ratio	0.87	0.90	0.67	0.85	0.53	0.13	0.89	0.82	0.24	0.86	0.69	0.56
Uniform Delay, d1	51.0	51.6	47.5	65.5	63.0	60.2	59.9	44.4	34.6	62.3	44.8	18.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.94	1.00	1.04	0.98	0.70	0.48
Incremental Delay, d2	15.1	19.1	3.9	15.9	2.6	0.3	11.1	3.0	0.7	16.3	1.6	0.5
Delay (s)	66.1	70.8	51.5	81.3	65.7	60.5	67.4	47.6	36.5	77.6	33.1	9.2
Level of Service	E	E	D	F	E	E	E	D	D	E	C	A
Approach Delay (s)		62.0			71.9			51.7			30.7	
Approach LOS		E			E			D			C	

Intersection Summary					
HCM Average Control Delay	49.4	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	74.9%	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												
Satd. Flow (prot)	0	1863	1583	1770	1863	0	0	1752	0	0	1611	0
Flt Permitted				0.950				0.959				
Satd. Flow (perm)	0	1863	1583	1770	1863	0	0	1752	0	0	1611	0
Volume (vph)	0	229	82	20	604	0	75	0	15	0	0	3
Lane Group Flow (vph)	0	283	164	29	636	0	0	124	0	0	8	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization	50.2%			ICU Level of Service A		
Analysis Period (min)	15					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	229	82	20	604	0	75	0	15	0	0	3
Peak Hour Factor	0.92	0.81	0.50	0.70	0.95	0.92	0.70	0.92	0.88	0.92	0.92	0.38
Hourly flow rate (vph)	0	283	164	29	636	0	107	0	17	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	636			447			984	976	283	993	1140	636
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	636			447			984	976	283	993	1140	636
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			51	100	98	100	100	98
cM capacity (veh/h)	948			1114			220	245	756	215	196	478

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	283	164	29	636	124	8
Volume Left	0	0	29	0	107	0
Volume Right	0	164	0	0	17	8
cSH	948	1700	1114	1700	243	478
Volume to Capacity	0.00	0.10	0.03	0.37	0.51	0.02
Queue Length 95th (ft)	0	0	2	0	66	1
Control Delay (s)	0.0	0.0	8.3	0.0	34.3	12.7
Lane LOS			A		D	B
Approach Delay (s)	0.0		0.4		34.3	12.7
Approach LOS					D	B

Intersection Summary						
Average Delay	3.7					
Intersection Capacity Utilization	50.2%	ICU Level of Service			A	
Analysis Period (min)	15					

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	1770	1863	1756	0
Flt Permitted			0.950		0.958	
Satd. Flow (perm)	1863	1583	1770	1863	1756	0
Volume (vph)	297	82	20	664	108	15
Lane Group Flow (vph)	323	89	22	722	133	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	297	82	20	664	108	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	323	89	22	722	117	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	848					
pX, platoon unblocked						
vC, conflicting volume			412		1088	323
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			412		1088	323
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		50	98
cM capacity (veh/h)			1147		234	718

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	323	89	22	722	134
Volume Left	0	0	22	0	117
Volume Right	0	89	0	0	16
cSH	1700	1700	1147	1700	255
Volume to Capacity	0.19	0.05	0.02	0.42	0.52
Queue Length 95th (ft)	0	0	1	0	70
Control Delay (s)	0.0	0.0	8.2	0.0	33.6
Lane LOS			A		D
Approach Delay (s)	0.0		0.2		33.6
Approach LOS					D

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	48.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	0	1859	1736	0
Flt Permitted				0.998	0.963	
Satd. Flow (perm)	1863	1583	0	1859	1736	0
Volume (vph)	169	76	25	559	66	20
Lane Group Flow (vph)	184	83	0	635	94	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	169	76	25	559	66	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	184	83	27	608	72	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			266		846	184
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			266		846	184
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		78	97
cM capacity (veh/h)			1298		326	859

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	184	83	635	93
Volume Left	0	0	27	72
Volume Right	0	83	0	22
cSH	1700	1700	1298	381
Volume to Capacity	0.11	0.05	0.02	0.25
Queue Length 95th (ft)	0	0	2	24
Control Delay (s)	0.0	0.0	0.6	17.5
Lane LOS			A	C
Approach Delay (s)	0.0		0.6	17.5
Approach LOS				C

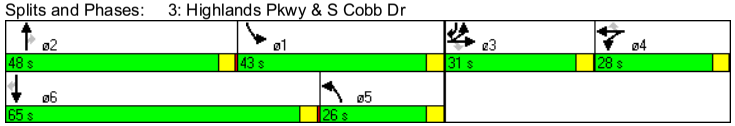
Intersection Summary				
Average Delay		2.0		
Intersection Capacity Utilization	54.6%	ICU Level of Service		A
Analysis Period (min)	15			

Future 2009 SAT Site Access Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1681	1736	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.981		0.950			0.950			0.950		
Satd. Flow (perm)	1681	1736	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Satd. Flow (RTOR)			245			197			148			138
Volume (vph)	311	109	274	381	88	173	315	1249	252	284	1301	320
Lane Group Flow (vph)	243	255	285	465	109	197	342	1288	293	379	1328	340
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	3	3		4	4		5	2		1	6	3
Permitted Phases			3			4			2			6
Total Split (s)	31.0	31.0	31.0	28.0	28.0	28.0	26.0	48.0	48.0	43.0	65.0	31.0
Act Effct Green (s)	25.7	25.7	25.7	23.6	23.6	23.6	19.2	48.5	48.5	36.2	65.5	91.1
Actuated g/C Ratio	0.17	0.17	0.17	0.16	0.16	0.16	0.13	0.32	0.32	0.24	0.44	0.61
v/c Ratio	0.84	0.86	0.60	0.86	0.37	0.47	0.78	0.78	0.48	0.89	0.60	0.33
Control Delay	85.0	86.2	15.9	77.7	60.4	10.9	74.8	44.2	20.9	68.9	24.9	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.3	0.1
Total Delay	85.0	86.2	15.9	77.7	60.4	10.9	74.8	44.2	20.9	70.5	25.1	2.3
LOS	F	F	B	E	E	B	E	D	C	E	C	A
Approach Delay		60.2			58.2			46.1			29.7	
Approach LOS		E			E			D			C	

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 64 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 43.7		Intersection LOS: D	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Highlands Pkwy & S Cobb Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	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	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1736	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1736	1583	3433	1863	1583	3433	5085	1583	1770	5085	1583
Volume (vph)	311	109	274	381	88	173	315	1249	252	284	1301	320
Peak-hour factor, PHF	0.91	0.70	0.96	0.82	0.81	0.88	0.92	0.97	0.86	0.75	0.98	0.94
Adj. Flow (vph)	342	156	285	465	109	197	342	1288	293	379	1328	340
RTOR Reduction (vph)	0	0	203	0	0	166	0	0	100	0	0	54
Lane Group Flow (vph)	243	255	82	465	109	31	342	1288	193	379	1328	286
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	3	3		4	4		5	2		1	6	3
Permitted Phases			3			4			2			6
Actuated Green, G (s)	25.7	25.7	25.7	23.6	23.6	23.6	19.2	48.5	48.5	36.2	65.5	91.2
Effective Green, g (s)	25.7	25.7	25.7	23.6	23.6	23.6	19.2	48.5	48.5	36.2	65.5	91.2
Actuated g/C Ratio	0.17	0.17	0.17	0.16	0.16	0.16	0.13	0.32	0.32	0.24	0.44	0.61
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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	3.0
Lane Grp Cap (vph)	288	297	271	540	293	249	439	1644	512	427	2220	962
v/s Ratio Prot	0.14	c0.15		c0.14	0.06		0.10	c0.25		c0.21	0.26	0.05
v/s Ratio Perm			0.05			0.02			0.12			0.13
v/c Ratio	0.84	0.86	0.30	0.86	0.37	0.12	0.78	0.78	0.38	0.89	0.60	0.30
Uniform Delay, d1	60.2	60.4	54.3	61.6	56.6	54.3	63.3	46.0	39.1	54.9	32.2	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.03	0.87	0.91	0.92	0.72	0.35
Incremental Delay, d2	19.6	21.0	0.6	13.2	0.8	0.2	6.5	2.9	1.6	15.8	0.9	0.1
Delay (s)	79.8	81.4	54.9	74.8	57.4	54.5	71.9	43.1	37.2	66.2	24.1	5.0
Level of Service	E	F	D	E	E	D	E	D	D	E	C	A
Approach Delay (s)		71.3			67.2			47.3			28.7	
Approach LOS		E			E			D			C	

Intersection Summary					
HCM Average Control Delay	46.6	HCM Level of Service	D		
HCM Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0		
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												
Satd. Flow (prot)	0	1861	1583	1770	1863	0	0	1736	0	0	1611	0
Flt Permitted		0.999		0.950				0.963				
Satd. Flow (perm)	0	1861	1583	1770	1863	0	0	1736	0	0	1611	0
Volume (vph)	2	215	112	20	189	0	85	0	19	0	0	2
Lane Group Flow (vph)	0	283	149	23	239	0	0	139	0	0	4	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization	35.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	215	112	20	189	0	85	0	19	0	0	2
Peak Hour Factor	0.50	0.77	0.75	0.88	0.79	0.92	0.80	0.92	0.58	0.92	0.92	0.50
Hourly flow rate (vph)	4	279	149	23	239	0	106	0	33	0	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1244										
pX, platoon unblocked												
vC, conflicting volume	239			429			576	572	279	605	721	239
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	239			429			576	572	279	605	721	239
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			75	100	96	100	100	99
cM capacity (veh/h)	1328			1131			419	420	760	385	345	800

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	283	149	23	239	139	4
Volume Left	4	0	23	0	106	0
Volume Right	0	149	0	0	33	4
cSH	1328	1700	1131	1700	468	800
Volume to Capacity	0.00	0.09	0.02	0.14	0.30	0.01
Queue Length 95th (ft)	0	0	2	0	31	0
Control Delay (s)	0.1	0.0	8.2	0.0	15.9	9.5
Lane LOS	A		A		C	A
Approach Delay (s)	0.1		0.7		15.9	9.5
Approach LOS					C	A

Intersection Summary					
Average Delay	3.0				
Intersection Capacity Utilization	35.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	1770	1863	1754	0
Flt Permitted			0.950		0.959	
Satd. Flow (perm)	1863	1583	1770	1863	1754	0
Volume (vph)	312	112	20	250	123	19
Lane Group Flow (vph)	339	122	22	272	155	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	312	112	20	250	123	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	339	122	22	272	134	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	848					
pX, platoon unblocked						
vC, conflicting volume			461		654	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			461		654	339
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		68	97
cM capacity (veh/h)			1100		423	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	339	122	22	272	154
Volume Left	0	0	22	0	134
Volume Right	0	122	0	0	21
cSH	1700	1700	1100	1700	447
Volume to Capacity	0.20	0.07	0.02	0.16	0.35
Queue Length 95th (ft)	0	0	2	0	38
Control Delay (s)	0.0	0.0	8.3	0.0	17.3
Lane LOS			A		C
Approach Delay (s)	0.0		0.6		17.3
Approach LOS					C

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	31.3%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Satd. Flow (prot)	1863	1583	0	1848	1736	0
Flt Permitted				0.992	0.963	
Satd. Flow (perm)	1863	1583	0	1848	1736	0
Volume (vph)	127	107	26	133	77	24
Lane Group Flow (vph)	138	116	0	173	110	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	127	107	26	133	77	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	138	116	28	145	84	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			254		339	138
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			254		339	138
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		87	97
cM capacity (veh/h)			1311		642	910

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	138	116	173	110
Volume Left	0	0	28	84
Volume Right	0	116	0	26
cSH	1700	1700	1311	691
Volume to Capacity	0.08	0.07	0.02	0.16
Queue Length 95th (ft)	0	0	2	14
Control Delay (s)	0.0	0.0	1.4	11.2
Lane LOS			A	B
Approach Delay (s)	0.0		1.4	11.2
Approach LOS				B

Intersection Summary				
Average Delay		2.7		
Intersection Capacity Utilization	30.9%	ICU Level of Service		A
Analysis Period (min)	15			

Traffic Volume Worksheets

07-017 Aspens Hills DRI

Traffic Volumes
Future Conditions

A&R Engineering
May-07

South Cobb Drive (SR 280) / Cumberland Parkway

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	536	1147	102	1785	195	844	92	1131	167	855	123	1145	129	1916	122	2167
Existing Traffic after deductions:	523	1080	93	1697	195	829	92	1116	167	855	120	1142	127	1916	122	2165
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	569	1217	108	1893.7	207	895	98	1200	177	907	130	1215	137	2033	129	2299
Base Condition (After Reduction):	555	1146	99	1800	207	879	98	1184	177	907	127	1212	135	2033	129	2297
Total New Trips	31	82	75	188	0	75	0	75	0	0	29	29	70	0	0	70
Future Traffic Volumes:	586	1228	174	1988	207	954	98	1259	177	907	156	1241	205	2033	129	2367

SAT. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	337	894	108	1339	235	873	118	1226	128	795	239	1162	117	805	140	1062
Existing Traffic after deductions:	330	856	103	1289	235	860	118	1213	128	795	236	1159	115	805	140	1060
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	358	948	115	1421	249	926	125	1301	136	843	254	1233	124	854	149	1127
Base Condition (After Reduction):	350	909	109	1368	249	912	125	1286	136	843	251	1230	122	854	149	1125
Total New Trips	38	99	91	228	0	107	0	107	0	0	41	41	99	0	0	99
Future Traffic Volumes:	388	1008	200	1596	249	1019	125	1393	136	843	292	1271	221	854	149	1224

07-017 Aspens Hills DRI
Traffic Volumes
Future Conditions

A&R Engineering
May-07

South Cobb Drive (SR 280) / Church Road / Kenwood Road / Oakdale Road

P.M. Peak Hour

	Northbound					Southwestbound					Southbound					Eastbound					Westbound				
Condition	L	T	Bear R	R	Tot	Hard L	Bear L	Bear R	Hard R	Tot	L	T	R	Hard L	Tot	L	T	R	Bear L	Tot	L	T	R	Hard R	Tot
Existing:	95	1717	27	94	1933	4	132	10	8	154	45	1123	31	2	1201	35	18	40	3	96	346	38	142	6	532
Existing Traffic after deductions:	95	1630	27	94	1846	4	132	10	8	154	25	1123	31	2	1181	35	18	40	3	96	333	38	141	6	518
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3		3.0	3.0	3.0	3.0	
Base Condition (Before Reduction):	101	1822	29	100	2051	4	140	11	8	163	48	1191	33	2	1274	37	19	42	3	102	367.0	40.0	151.0	6.0	564
Base Condition (After Reduction):	101	1729	29	100	1958	4	140	11	8	163	27	1191	33	2	1253	37	19	42	3	102	354	40	149	6	550
Total New Trips	6	113	8	115	242	7	5	0	0	12	104	70	0	0	174	0	7	5	0	12	136	6	76	5	223
Future Traffic Volumes	107	1842	37	215	2200	11	145	11	8	175	131	1261	33	2	1427	37	26	47	3	114	490	46	225	11	773

SAT Peak Hour

	Northbound					Southwestbound					Southbound					Eastbound					Westbound				
Condition	L	T	Bear R	R	Tot	Hard L	Bear L	Bear R	Hard R	Tot	L	T	R	Hard L	Tot	L	T	R	Bear L	Tot	L	T	R	Hard R	Tot
Existing:	86	1230	17	60	1393	3	60	4	11	78	36	1363	43	9	1451	51	13	62	6	132	89	11	48	5	153
Existing Traffic after deductions:	86	1182	17	60	1345	3	60	4	11	78	18	1363	43	9	1433	51	13	62	6	132	75	11	46	5	137
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3		3.0	3.0	3.0	3.0	
Base Condition (Before Reduction):	91	1305	18	64	1478	3	64	4	12	83	38	1446	46	10	1539	54	14	66	6	140	94.0	12.0	51.0	5.0	162.0
Base Condition (After Reduction):	91	1254	18	64	1427	3	64	4	12	83	19	1446	46	10	1520	54	14	66	6	140	79	12	49	5	145
Total New Trips	8	137	9	162	316	10	7	0	0	17	148	98	0	0	246	0	10	7	0	17	165	8	90	6	269
Future Traffic Volumes	99	1391	27	226	1743	13	71	4	12	100	167	1544	46	10	1766	54	24	73	6	157	244	20	139	11	414

07-017 Aspens Hills DRI
Traffic Volumes
Future Conditions

A&R Engineering
May-07

South Cobb Drive (SR 280) / Highland Parkway / Main Site Driveway

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	456	1353	23	1832	25	1000	495	1520	598	19	468	1085	48	39	27	114
Existing Traffic after deductions:	456	1266	23	1745	25	987	495	1507	598	19	468	1085	48	39	27	114
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	484	1435	24	1943.6	27	1061	525	1613	634	20	497	1151	51	41	29	121
Base Condition (After Reduction):	484	1343	24	1851	27	1048	525	1599	634	20	497	1151	51	41	29	121
Pass by adjustments	0	-39	39	0	69	-69	0	0	0	0	0	0	75	0	43	118
Total New Trips	36	112	92	240	80	100	36	216	46	66	0	112	151	48	85	284
Future Traffic Volumes:	520	1416	155	2091	176	1079	561	1815	680	86	497	1263	277	89	157	523

SAT. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	255	1141	55	1451	24	1265	260	1549	234	14	258	506	59	29	14	102
Existing Traffic after deductions:	255	1093	55	1403	24	1251	260	1535	234	14	258	506	59	29	14	102
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	271	1210	58	1539	25	1342	276	1643	248	15	274	537	63	31	15	108
Base Condition (After Reduction):	271	1160	58	1488	25	1327	276	1628	248	15	274	537	63	31	15	108
Pass by adjustments	0	-62	62	0	147	-147	0	0	0	0	0	0	135	0	57	192
Total New Trips	44	151	132	327	112	121	44	277	63	94	0	157	183	57	101	341
Future Traffic Volumes:	315	1249	252	1815	284	1301	320	1905	311	109	274	694	381	88	173	641

07-017 Aspens Hills DRI

Traffic Volumes
Future Conditions

A&R Engineering
May-07

South Cobb Drive (SR 280) / I-285 Southbound Off-Ramp

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	67	1214	0	1281	0	941	730	1671	0	0	0	0	411	0	924	1335
Existing Traffic after deductions:	67	1162	0	1229	0	933	725	1658	0	0	0	0	411	0	862	1273
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	71	1288	0	1359	0	998	774	1773	0	0	0	0	436	0	980	1416
Base Condition (After Reduction):	71	1232	0	1303	0	990	769	1759	0	0	0	0	436	0	915	1351
Total New Trips	0	116	0	116	0	189	63	252	0	0	0	0	0	0	116	116
Future Traffic Volumes:	71	1348	0	1419	0	1179	832	2011	0	0	0	0	436	0	1031	1467

SAT. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	59	1015	0	1074	0	1031	628	1659	0	0	0	0	237	0	742	979
Existing Traffic after deductions:	59	994	0	1053	0	1022	622	1645	0	0	0	0	237	0	717	954
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	63	1077	0	1139	0	1094	666	1760	0	0	0	0	251	0	787	1039
Base Condition (After Reduction):	63	1054	0	1117	0	1084	660	1745	0	0	0	0	251	0	761	1012
Total New Trips	0	164	0	164	0	228	76	304	0	0	0	0	0	0	164	164
Future Traffic Volumes:	63	1218	0	1281	0	1312	736	2049	0	0	0	0	251	0	925	1176

07-017 Aspens Hills DRI

Traffic Volumes
Future Conditions

A&R Engineering
May-07

South Cobb Drive (SR 280) / I-285 Northbound Off-Ramp

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	442	265	707	701	620	0	1321	858	0	75	933	0	0	0	0
Existing Traffic after deductions:	0	434	265	699	694	619	0	1313	814	0	75	889	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	469	281	750.06	744	658	0	1401	910	0	80	990	0	0	0	0
Base Condition (After Reduction):	0	460	281	742	736	657	0	1393	863	0	80	943	0	0	0	0
Total New Trips	0	58	0	58	126	63	0	189	58	0	0	58	0	0	0	0
Future Traffic Volumes:	0	518	281	800	862	720	0	1582	921	0	80	1001	0	0	0	0

SAT. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	359	280	639	800	517	0	1317	705	0	53	758	0	0	0	0
Existing Traffic after deductions:	0	356	280	636	792	516	0	1308	687	0	53	740	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	381	297	678	849	548	0	1397	748	0	56	804	0	0	0	0
Base Condition (After Reduction):	0	377	297	674	840	547	0	1388	729	0	56	785	0	0	0	0
Total New Trips	0	82	0	82	152	76	0	228	82	0	0	82	0	0	0	0
Future Traffic Volumes:	0	459	297	756	992	623	0	1616	811	0	56	867	0	0	0	0

07-017 Aspens Hills DRI
Traffic Volumes
Future Conditions

A&R Engineering
May-07

Church Road / North Church Lane / Valley Crest Co Private Driveway

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	8	9	6	23	104	2	147	253	64	100	1	165	0	331	34	365
Existing Traffic after deductions:	8	9	6	23	104	2	147	253	64	93	1	158	0	317	34	351
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	8	10	6	24.401	110	2	156	268	68	106	1	175	0	351	36	387
Base Condition (After Reduction):	8	10	6	24	110	2	156	268	68	99	1	168	0	336	36	372
Total New Trips	0	0	0	0	0	0	29	29	31	13	0	44	0	12	0	12
Future Traffic Volumes:	8	10	6	24	110	2	185	297	99	112	1	212	0	348	36	384

SAT. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	1	1	2	38	0	41	79	29	61	1	91	0	63	35	98
Existing Traffic after deductions:	0	1	1	2	38	0	41	79	29	54	1	84	0	56	35	91
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	1	1	2	40	0	43	84	31	65	1	97	0	67	37	104
Base Condition (After Reduction):	0	1	1	2	40	0	43	84	31	57	1	89	0	59	37	97
Total New Trips	0	0	0	0	0	0	41	41	38	15	0	53	0	16	0	16
Future Traffic Volumes:	0	1	1	2	40	0	84	125	69	72	1	142	0	75	37	113

07-017 Aspens Hills DRI

Traffic Volumes
Future Conditions

A&R Engineering
May-07

Highlands Parkway / Oakdale Road / Integrity Heights Condos Private Driveway

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	77	2	353	432	20	16	3	39	5	733	222	960	600	411	13	1024
Existing Traffic after deductions:	77	2	353	432	20	16	3	39	5	733	222	960	600	411	13	1024
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	82	2	374	458.31	21	17	3	41	5	778	236	1018	637	436	14	1086
Base Condition (After Reduction):	82	2	374	458	21	17	3	41	5	778	236	1018	637	436	14	1086
Total New Trips	0	0	82	82	0	0	0	0	0	29	0	29	89	31	0	120
Future Traffic Volumes:	82	2	456	540	21	17	3	41	5	807	236	1047	726	467	14	1206

SAT. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	35	0	286	321	0	2	0	2	1	197	41	239	293	187	1	481
Existing Traffic after deductions:	35	0	286	321	0	2	0	2	1	197	41	239	293	187	1	481
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	37	0	303	341	0	2	0	2	1	209	43	254	311	198	1	510
Base Condition (After Reduction):	37	0	303	341	0	2	0	2	1	209	43	254	311	198	1	510
Total New Trips	0	0	114	114	0	0	0	0	0	41	0	41	106	38	0	144
Future Traffic Volumes:	37	0	417	455	0	2	0	2	1	250	43	295	417	236	1	654

07-017 Aspens Hills DRI
Traffic Volumes
Future Conditions

A&R Engineering
May-07

US 278 (US 78) / Oakdale Road / Discovery Boulevard

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	75	125	94	294	97	320	422	839	133	461	68	662	207	1243	97	1547
Existing Traffic after deductions:	75	125	94	294	97	320	422	839	133	461	68	662	207	1243	97	1547
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	80	133	100	311.9	103	339	448	890	141	489	72	702	220	1319	103	1641
Base Condition (After Reduction):	80	133	100	312	103	339	448	890	141	489	72	702	220	1319	103	1641
Total New Trips	0	0	0	0	13	0	50	63	46	0	0	46	0	0	12	12
Future Traffic Volumes:	80	133	100	312	116	339	498	953	187	489	72	748	220	1319	115	1653

SAT. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	59	92	53	204	49	74	170	293	139	629	61	829	69	605	49	723
Existing Traffic after deductions:	59	92	53	204	49	74	170	293	139	629	61	829	69	605	49	723
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	63	98	56	216	52	79	180	311	147	667	65	879	73	642	52	767
Base Condition (After Reduction):	63	98	56	216	52	79	180	311	147	667	65	879	73	642	52	767
Total New Trips	0	0	0	0	15	0	61	76	66	0	0	66	0	0	16	16
Future Traffic Volumes:	63	98	56	216	67	79	241	387	213	667	65	945	73	642	68	783

07-017 Aspens Hills DRI
Traffic Volumes
Future Conditions

A&R Engineering
May-07

South Cobb Drive (SR 280) / Oak Drive / Tibarron Parkway (Right-in / Right -out Driveway)

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	412	1686	114	2212	0	1459	43	1502	8	0	245	253	0	0	87	87
Existing Traffic after deductions:	412	1686	0	2098	0	1446	43	1489	8	0	245	253	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	437	1789	121	2346.7	0	1548	46	1593	8	0	260	268	0	0	92	92
Base Condition (After Reduction):	437	1789	0	2226	0	1534	46	1580	8	0	260	268	0	0	0	0
Pass by adjustments	0	-59	59	0	0	0	0	0	0	0	0	0	0	0	64	64
Total New Trips	0	163	69	232	0	252	0	252	0	0	0	0	0	0	79	79
Future Traffic Volumes:	437	1893	128	2458	0	1786	46	1832	8	0	260	268	0	0	143	143

SAT. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	215	1465	46	1726	0	1607	12	1619	15	0	208	223	0	0	48	48
Existing Traffic after deductions:	215	1465	0	1680	0	1593	12	1605	15	0	208	223	0	0	0	0
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	228	1554	49	1831	0	1705	13	1718	16	0	221	237	0	0	51	51
Base Condition (After Reduction):	228	1554	0	1782	0	1690	13	1702	16	0	221	237	0	0	0	0
Pass by adjustments	0	-98	98	0	0	0	0	0	0	0	0	0	0	0	90	90
Total New Trips	0	231	99	330	0	304	0	304	0	0	0	0	0	0	96	96
Future Traffic Volumes:	228	1687	197	2112	0	1994	13	2006	16	0	221	237	0	0	186	186

07-017 Aspens Hills DRI
Traffic Volumes
Future Conditions

A&R Engineering
May-07

Church Road / Groover Drive/ North Site Driveway 2

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	14	0	7	21	0	0	3	3	0	136	20	156	14	512	0	526
Existing Traffic after deductions:	0	0	0	0	0	0	3	3	0	136	0	136	0	512	0	512
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	15	0	7	22	0	0	3	3	0	144	21	166	15	543	0	558
Base Condition (After Reduction):	0	0	0	0	0	0	3	3	0	144	0	144	0	543	0	543
Pass by adjustments	9	0	2	11	0	0	0	0	0	-2	2	0	8	-8	0	0
Total New Trips	66	0	13	79	0	0	0	0	0	87	80	167	12	69	0	81
Future Traffic Volumes:	75	0	15	90	0	0	3	3	0	229	82	311	20	604	0	624

SAT. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	16	0	7	23	0	0	2	2	2	92	18	112	7	95	0	102
Existing Traffic after deductions:	0	0	0	0	0	0	2	2	2	92	0	94	0	95	0	95
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	17	0	7	24	0	0	2	2	2	98	19	119	7	101	0	108
Base Condition (After Reduction):	0	0	0	0	0	0	2	2	2	98	0	100	0	101	0	101
Pass by adjustments	3	0	3	6	0	0	0	0	0	-3	3	0	3	-3	0	0
Total New Trips	82	0	16	98	0	0	0	0	0	120	109	229	17	91	0	108
Future Traffic Volumes:	85	0	19	104	0	0	2	2	2	215	112	329	20	189	0	209

07-017 Aspens Hills DRI

Traffic Volumes
Future Conditions

A&R Engineering
May-07

Church Road / North Site Driveway 1

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	156	0	156	0	529	0	529
Existing Traffic after deductions:	0	0	0	0	0	0	0	0	0	136	0	136	0	515	0	515
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	0	0	0	0	0	0	0	0	166	0	166	0	561	0	561
Base Condition (After Reduction):	0	0	0	0	0	0	0	0	0	144	0	144	0	546	0	546
Pass by adjustments	9	0	2	11	0	0	0	0	0	-2	2	0	8	-8	0	0
Total New Trips	99	0	13	112	0	0	0	0	0	155	80	235	12	126	0	138
Future Traffic Volumes:	108	0	15	123	0	0	0	0	0	297	82	379	20	664	0	684

SAT. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	112	0	112	0	113	0	113
Existing Traffic after deductions:	0	0	0	0	0	0	0	0	0	94	0	94	0	97	0	97
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	0	0	0	0	0	0	0	0	119	0	119	0	120	0	120
Base Condition (After Reduction):	0	0	0	0	0	0	0	0	0	100	0	100	0	103	0	103
Pass by adjustments	3	0	3	6	0	0	0	0	0	-3	3	0	3	-3	0	0
Total New Trips	120	0	16	136	0	0	0	0	0	215	109	324	17	150	0	167
Future Traffic Volumes:	123	0	19	142	0	0	0	0	0	312	112	424	20	250	0	270

07-017 Aspens Hills DRI

Traffic Volumes
Future Conditions

A&R Engineering
May-07

Church Road / North Site Driveway 3

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	143	0	143	0	526	0	526
Existing Traffic after deductions:	0	0	0	0	0	0	0	0	0	136	0	136	0	512	0	512
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	0	0	0	0	0	0	0	0	152	0	152	0	558	0	558
Base Condition (After Reduction):	0	0	0	0	0	0	0	0	0	144	0	144	0	543	0	543
Pass by adjustments	9	0	2	11	0	0	0	0	0	-2	2	0	8	-8	0	0
Total New Trips	57	0	18	75	0	0	0	0	0	27	74	101	17	24	0	41
Future Traffic Volumes:	66	0	20	86	0	0	0	0	0	169	76	245	25	559	0	584

SAT. Peak Hour

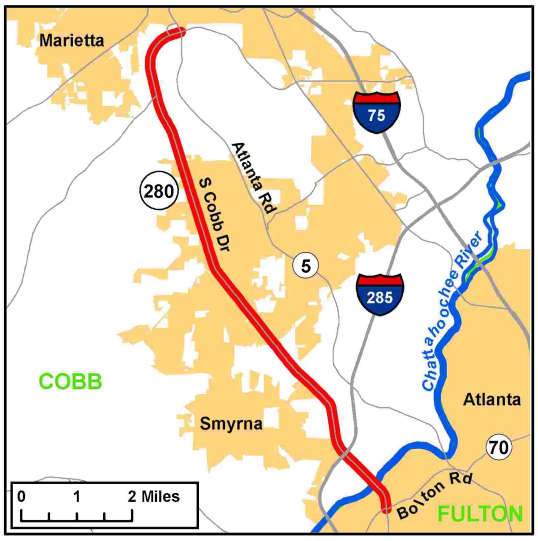
Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	99	0	99	0	102	0	102
Existing Traffic after deductions:	0	0	0	0	0	0	0	0	0	92	0	92	0	95	0	95
Growth Factor (%):	3	3	3		3	3	3		3	3	3		3	3	3	
Base Condition (Before Reduction):	0	0	0	0	0	0	0	0	0	105	0	105	0	108	0	108
Base Condition (After Reduction):	0	0	0	0	0	0	0	0	0	98	0	98	0	101	0	101
Pass by adjustments	3	0	3	6	0	0	0	0	0	-3	3	0	3	-3	0	0
Total New Trips	74	0	21	95	0	0	0	0	0	32	104	136	23	35	0	58
Future Traffic Volumes:	77	0	24	101	0	0	0	0	0	127	107	234	26	133	0	159

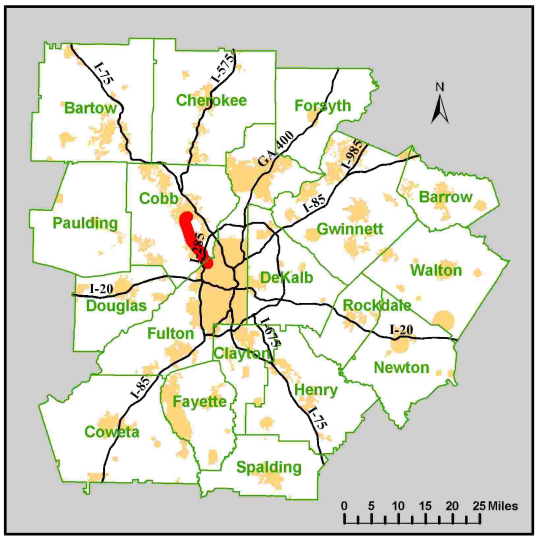
Planned and Programmed Improvements

CO-175A

Atlanta Region - Mobility2030 Transportation Plan
PROJECT FACT SHEET

Short Title	SR 280 (SOUTH COBB DRIVE) FROM SR 5 (ATLANTA ROAD) IN COBB COUNTY TO SR 70 (BOLTON ROAD) IN CITY OF ATLANTA
GDOT Project No.	752760-
Federal ID No.	STP-9000(29)
Status	Long Range
Detailed Description and Justification	None
Service Type	Roadway Capacity
Sponsor	GDOT
Jurisdiction	Cobb County
Existing Thru Lane	4 *(applicable for road projects only)*
Planned Thru Lane	6 *(applicable for road projects only)*
Corridor Length	10 miles *(not applicable for all project types)*
Network Year	2030 *(required if modeled for conformity)*
Completion Date	2030
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	FEDAID-2012-2030	LR 2012-2020	**$850,000**	$680,000	$170,000	$0,000	$0,000
ROW	FEDAID-2012-2030	LR 2012-2020	**$10,900,000**	$8,720,000	$2,180,000	$0,000	$0,000
CST	FEDAID-2012-2030	LR 2021-2030	**$8,500,000**	$6,800,000	$1,700,000	$0,000	$0,000
				$16,200,000	**$4,050,000**	**$0,000**	**$0,000**

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

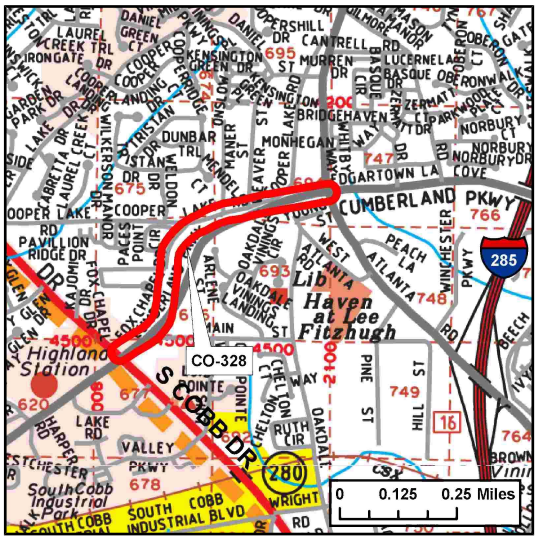
? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

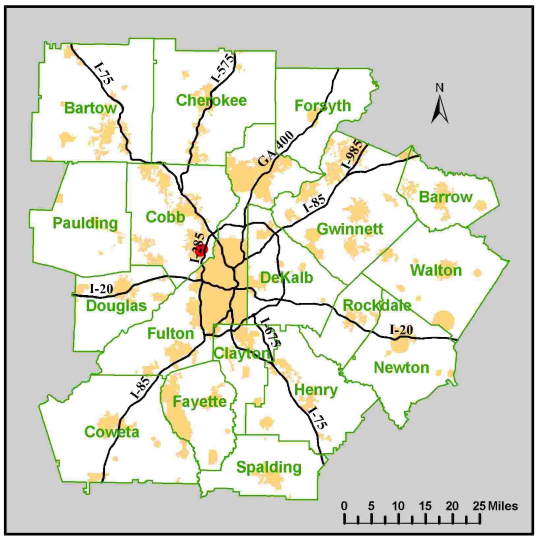
Report Generated: 3/9/2007

CO-328

Atlanta Region - Mobility2030 Transportation Plan
PROJECT FACT SHEET

Short Title	CUMBERLAND PARKWAY FROM SR 280 (SOUTH COBB PARKWAY) TO ATLANTA ROAD
GDOT Project No.	N/A
Federal ID No.	
Status	Programmed
Detailed Description and Justification	The Cumberland Parkway road improvement project consists of widening Cumberland Parkway from 4 to 6 lanes from Atlanta Road to South Cobb Drive/SR 280, providing bicycle and pedestrian facilities, and enhancing the ITS and ATMS to coordinate with traffic signaling countywide.
Service Type	Roadway Capacity
Sponsor	Cobb County
Jurisdiction	Cobb County
Existing Thru Lane	4 *(applicable for road projects only)*
Planned Thru Lane	6 *(applicable for road projects only)*
Corridor Length	0.63 miles *(not applicable for all project types)*
Network Year	2010 *(required if modeled for conformity)*
Completion Date	2008
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	AUTH	**$0,000**	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	2005	**$0,000**	$0,000	$0,000	$0,000	$0,000
CST	Local Jurisdiction/Municipality Funds	2006	**$3,000,000**	$0,000	$0,000	$0,000	$3,000,000
				$0,000	**$0,000**	**$0,000**	**$3,000,000**

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

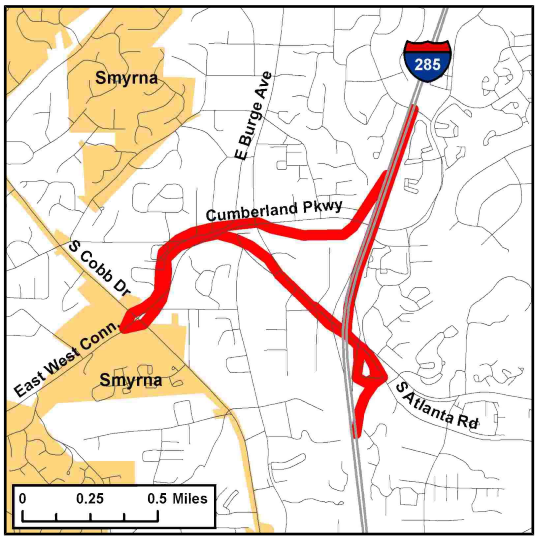
? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

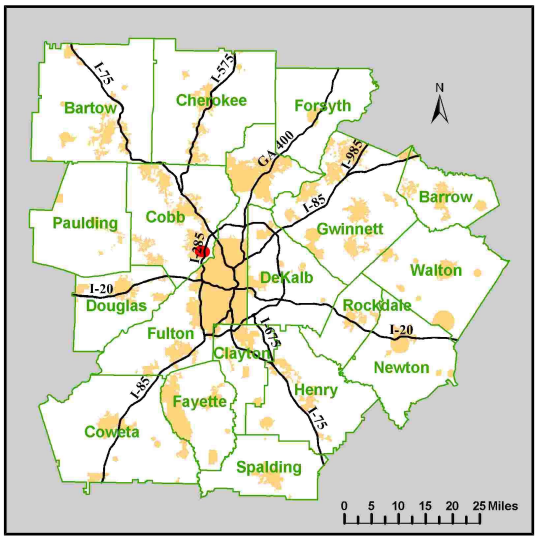
Report Generated: 3/9/2007

CO-AR-070B

Atlanta Region - Mobility2030 Transportation Plan
PROJECT FACT SHEET

Short Title	I-285 WEST AT ATLANTA ROAD BRIDGE [SEE ALSO CO-AR-070A AND CO-AR-070C]
GDOT Project No.	712760-
Federal ID No.	NH-IM-285-1(316)
Status	Long Range
Detailed Description and Justification	This project will construct an interchange at the I-285 West and the East West Connector. It is a companion project to CO-AR 070C.
Service Type	Interchange Capacity
Sponsor	Cobb County
Jurisdiction	Cobb County
Existing Thru Lane	0 *(applicable for road projects only)*
Planned Thru Lane	4 *(applicable for road projects only)*
Corridor Length	N/A miles *(not applicable for all project types)*
Network Year	2015 *(required if modeled for conformity)*
Completion Date	2015
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	AUTH	**$0,000**	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	LR 2012-2020	**$5,500,000**	$0,000	$0,000	$0,000	$5,500,000
CST	High Priority Projects from TEA-21	LR 2012-2020	**$19,170,000**	$15,336,000	$3,834,000	$0,000	$0,000
				$15,336,000	**$3,834,000**	**$0,000**	**$5,500,000**

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

Report Generated: 3/9/2007

Bus Routes

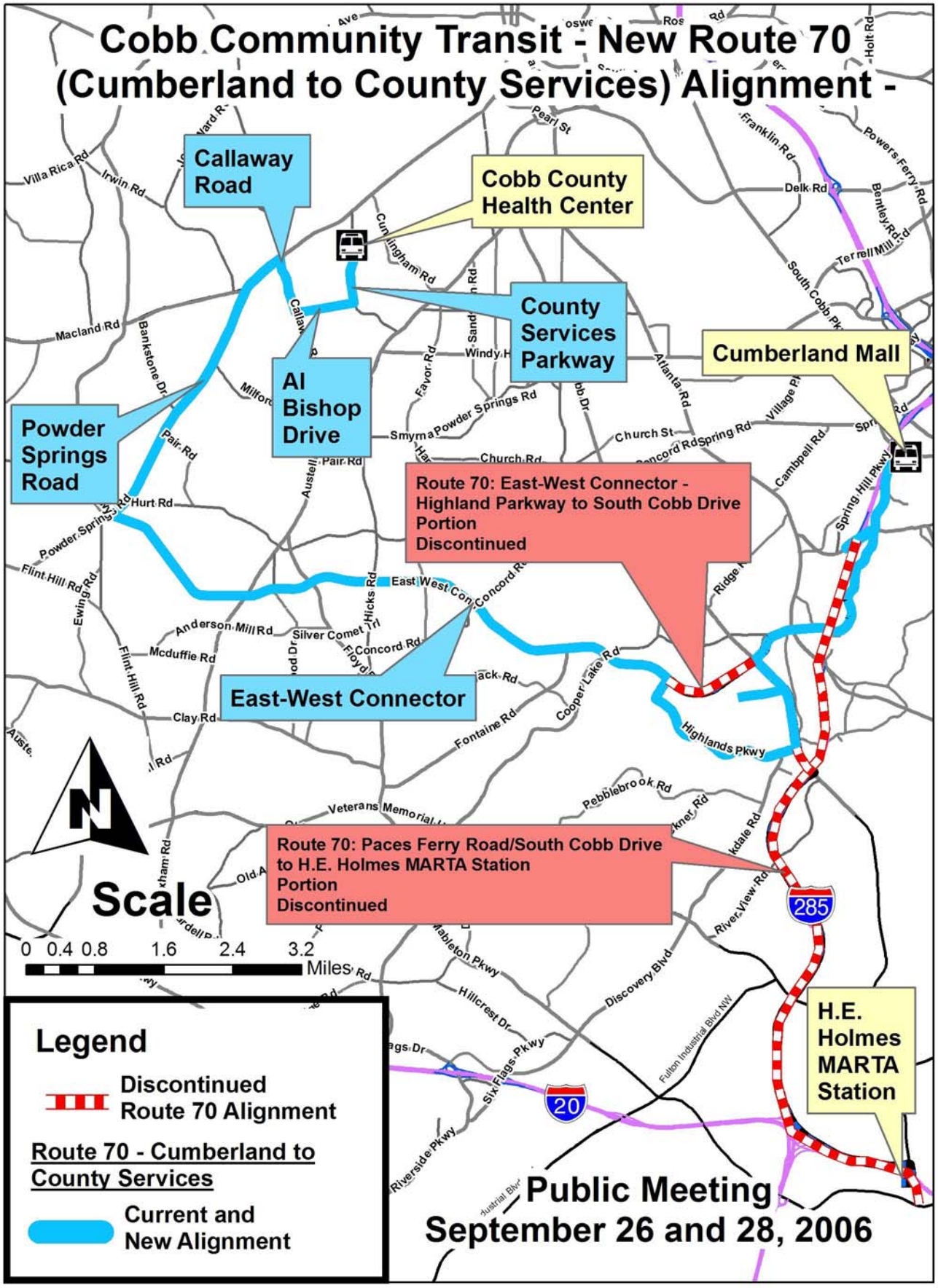
Effective 10/09/2006

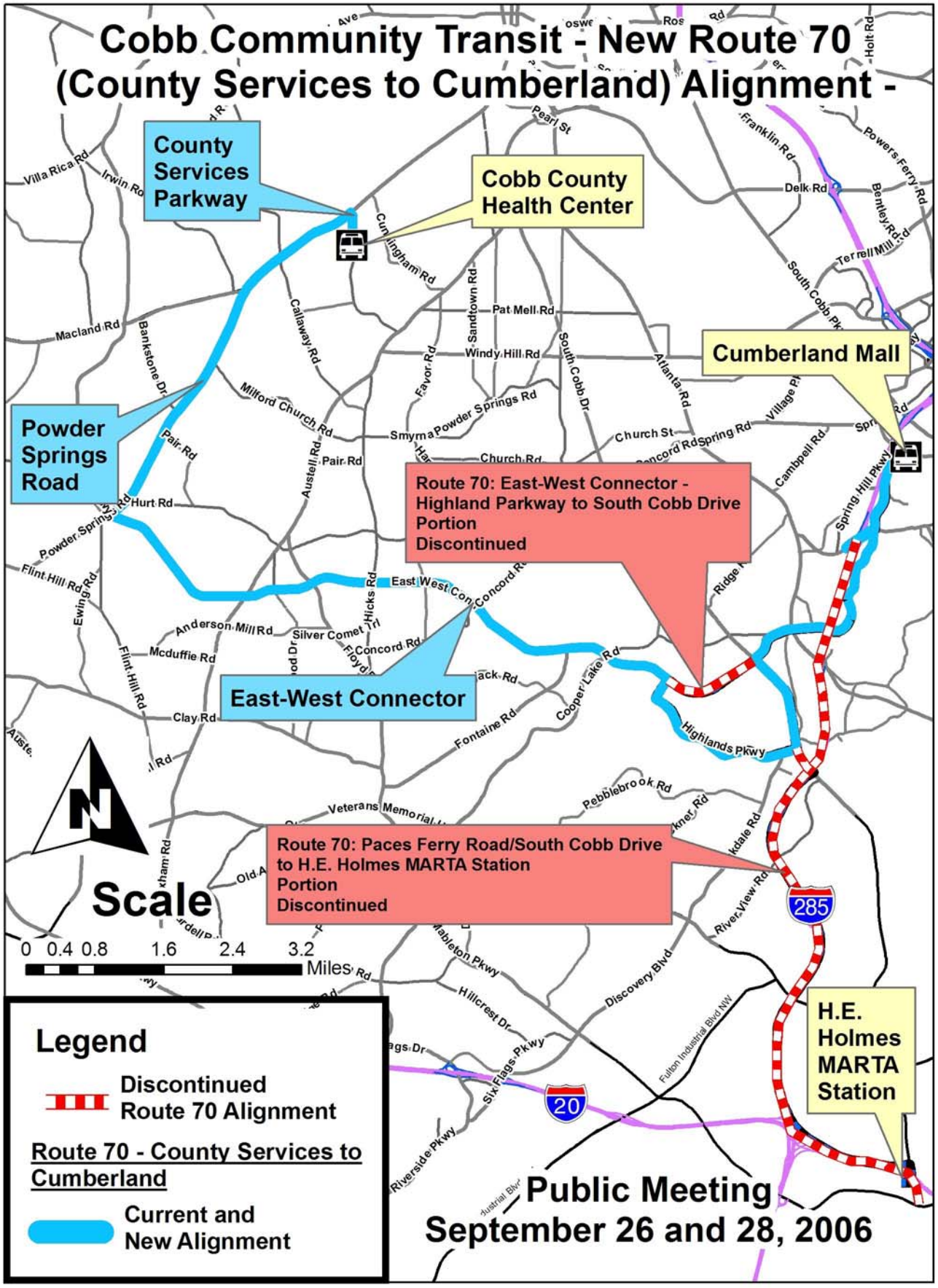
Route 70 SATURDAY
From County Services to Cumberland Transfer Center

County Services Pkwy @ Health Dept.	Kroger Plaza	E/W Connector @ Brookwood	Cumberland @ S. Cobb Drive	Arrives CTC
6:30 AM	6:47 AM	6:56 AM	7:23 AM	7:45 AM
9:10 AM	9:27 AM	9:36 AM	10:03 AM	10:25 AM
11:50 AM	12:07 PM	12:16 PM	12:43 PM	1:05 PM
2:30 PM	2:47 PM	2:56 PM	3:23 PM	3:45 PM
5:10 PM	5:27 PM	5:36 PM	6:03 PM	6:25 PM
7:50 PM	8:07 PM	8:16 PM	8:43 PM	9:05 PM

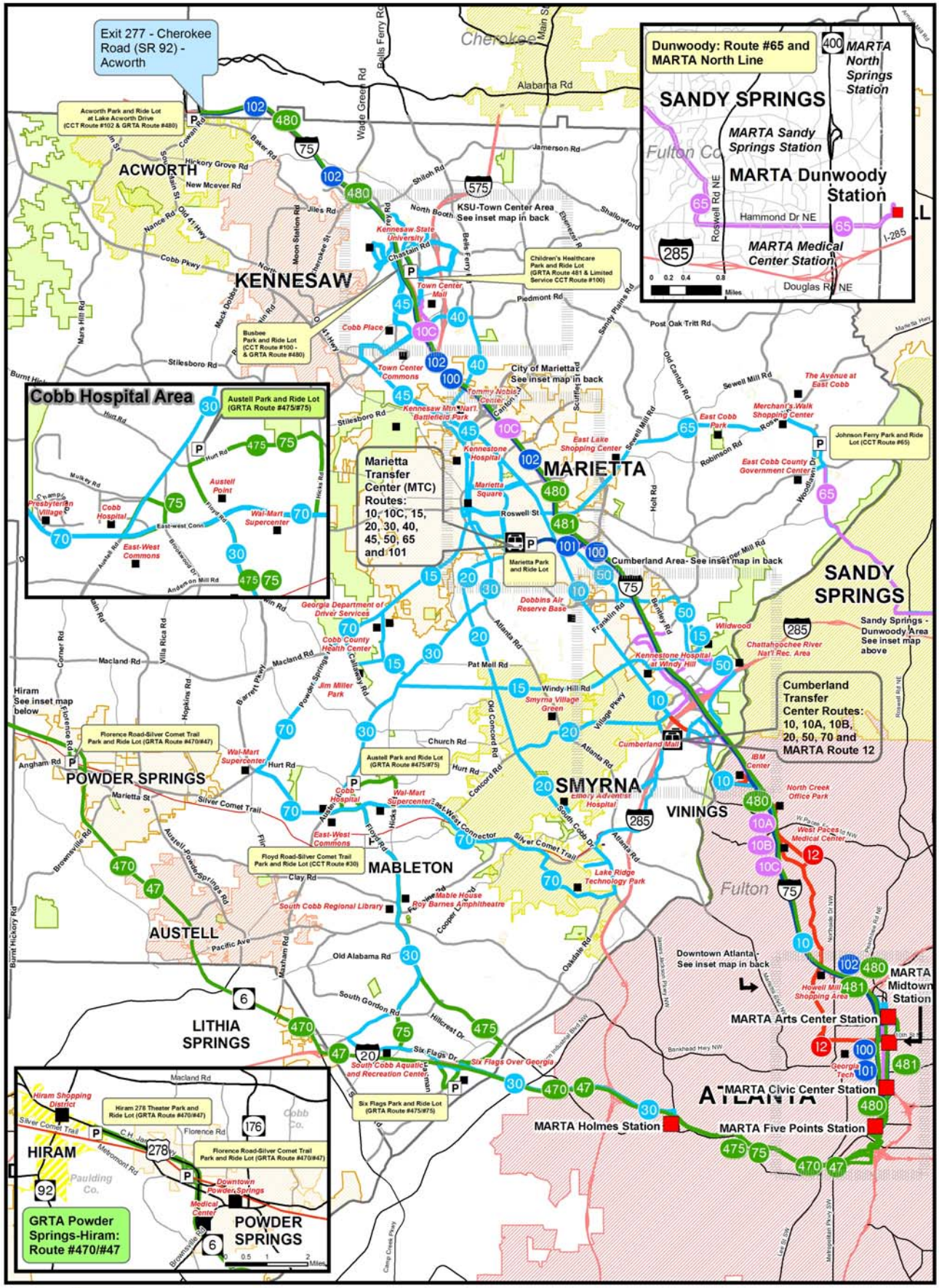
Route 70 SATURDAY
From Cumberland Transfer Center to County Services

Leaves CTC	Cumberland @ S. Cobb Drive	Brookwood Home Depot	Powder Springs Rd @ Marathon Gas Station	County Services Pkwy @ Health Dept.
7:50 AM	8:12 AM	8:39 AM	8:48 AM	9:05 AM
10:30 AM	10:52 AM	11:19 AM	11:28 AM	11:45 AM
1:10 PM	1:32 PM	1:59 PM	2:08 PM	2:25 PM
3:50 PM	4:12 PM	4:39 PM	4:48 PM	5:05 PM
6:30 PM	6:52 PM	7:19 PM	7:28 PM	7:45 PM
9:10 PM	9:32 PM	9:59 PM	10:08 PM	10:25 PM


Cobb Community Transit - New Route 70
(Cumberland to County Services) Alignment -
Callaway Road
Cobb County Health Center
County Services Parkway
Cumberland Mall
Al Bishop Drive
Powder Springs Road
Route 70: East-West Connector - Highland Parkway to South Cobb Drive Portion
Discontinued
East-West Connector
Route 70: Paces Ferry Road/South Cobb Drive to H.E. Holmes MARTA Station Portion
Discontinued
H.E. Holmes MARTA Station
Scale
0 0.4 0.8 1.6 2.4 3.2
Miles
Legend
Discontinued Route 70 Alignment
Route 70 - Cumberland to County Services
Current and New Alignment
Public Meeting
September 26 and 28, 2006


Cobb Community Transit - New Route 70
(County Services to Cumberland) Alignment -
County Services Parkway
Cobb County Health Center
Cumberland Mall
Powder Springs Road
Route 70: East-West Connector - Highland Parkway to South Cobb Drive Portion Discontinued
East-West Connector
Route 70: Paces Ferry Road/South Cobb Drive to H.E. Holmes MARTA Station Portion Discontinued
H.E. Holmes MARTA Station
Scale
0 0.4 0.8 1.6 2.4 3.2
Miles
Legend
Discontinued Route 70 Alignment
Route 70 - County Services to Cumberland
Current and New Alignment
Public Meeting
September 26 and 28, 2006

Cobb Community Transit (CCT) System Map
May 2007



Effective 10/09/2006

Route 70 WEEKDAY
From County Services to Cumberland Transfer Center

County Services Pkwy @ Health Dept.	Kroger Plaza	E/W Connector @ Brookwood	Cumberland @ S. Cobb Drive	Arrives CTC
5:45 AM	6:07 AM	6:21 AM	6:48 AM	7:10 AM
6:45 AM	7:07 AM	7:21 AM	7:48 AM	8:10 AM
7:35 AM	7:57 AM	8:11 AM	8:38 AM	9:00 AM
8:45 AM	9:02 AM	9:11 AM	9:38 AM	10:00 AM
10:25 AM	10:42 AM	10:51 AM	11:18 AM	11:40 AM
11:25 AM	11:42 AM	11:51 AM	12:18 PM	12:40 PM
1:05 PM	1:22 PM	1:31 PM	1:58 PM	2:20 PM
2:05 PM	2:22 PM	2:31 PM	2:58 PM	3:20 PM
3:55 PM	4:17 PM	4:31 PM	4:58 PM	5:20 PM
5:00 PM	5:22 PM	5:36 PM	6:03 PM	6:25 PM
5:45 PM	6:02 PM	6:11 PM	6:38 PM	7:00 PM
6:45 PM	7:02 PM	7:11 PM	7:38 PM	8:00 PM
7:50 PM	8:07 PM	8:16 PM	8:43 PM	9:05 PM

Route 70 WEEKDAY
From Cumberland Transfer Center to County Services

Leaves CTC	Cumberland @ S. Cobb Drive	Brookwood Home Depot	Powder Springs Rd @ Marathon Gas Station	County Services Pkwy @ Health Dept.
6:15 AM	6:37 AM	7:04 AM	7:13 AM	7:30 AM
7:15 AM	7:37 AM	8:04 AM	8:13 AM	8:30 AM
8:15 AM	8:37 AM	9:04 AM	9:13 AM	9:30 AM
9:05 AM	9:27 AM	9:54 AM	10:03 AM	10:20 AM
10:05 AM	10:27 AM	10:54 AM	11:03 AM	11:20 AM
11:45 AM	12:07 PM	12:34 PM	12:43 PM	1:00 PM
12:45 PM	1:07 PM	1:34 PM	1:43 PM	2:00 PM
2:25 PM	2:47 PM	3:14 PM	3:28 PM	3:50 PM
3:25 PM	3:47 PM	4:14 PM	4:28 PM	4:50 PM
5:25 PM	5:47 PM	6:14 PM	6:23 PM	6:40 PM
6:30 PM	6:52 PM	7:19 PM	7:28 PM	7:45 PM
7:05 PM	7:27 PM	7:54 PM	8:03 PM	8:20 PM
8:05 PM	8:27 PM	8:54 PM	9:03 PM	9:20 PM
9:10 PM	9:32 PM	9:59 PM	10:08 PM	10:25 PM

Proposed Facility Site Plan