

TRAFFIC IMPACT STUDY

For

**ABTB Mid-Atlantic, LLC
Proposed Taco Bell Fast Food Restaurant**

Property Located at:

**10120 Fairfax Boulevard
Boulevard Marketplace; Parcel D
City of Fairfax, Fairfax County, VA**

Prepared by:



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TLV

INTRODUCTION

It is proposed to construct a Taco Bell Fast Food Restaurant w/ Drive-Thru on a parcel of land currently developed with a parking area, located along the westbound side of Fairfax Boulevard (US Route 50) in City of Fairfax, Fairfax County, Virginia (see Figure 1 in Appendix A). The site is designated as Boulevard Marketplace; Parcel D on the City of Fairfax Tax Maps. The site is currently developed with a parking area and had been previously approved for the construction of a 5,055 SF Retail Building and separately, a 3,500 SF Bank with Drive-Thru; however, the previously approved uses have not been constructed. It is proposed to construct a 2,256 SF Taco Bell Fast Food Restaurant with Drive-Thru (“The Project”). The site is located within the CR – Commercial Retail Zone. Access to the site is currently provided via one full movement, signalized driveway and two right in/right out driveways along Fairfax Boulevard (US Route 50) and one full movement driveway along Fair Woods Parkway. It is proposed to maintain the existing access points.

Dynamic Traffic LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.
- Existing traffic data was collected via manual turning movement (MTM) counts during the weekday AM and weekday PM peak periods at the intersections of:
 - Fairfax Boulevard & Boulevard Marketplace/Gatewood Plaza Driveway
 - Fairfax Boulevard WB & Western Right Turn In/Right Turn Out Driveway
 - Fairfax Boulevard WB & Eastern Right Turn In/Right Turn Out Driveway
 - Fair Woods Parkway & Northern Site Driveway/CVS Driveway
 - Fairfax Boulevard & Fair Woods Parkway
- Projections of traffic to be generated by the proposed development were prepared utilizing trip generation data as published by the Institute of Transportation Engineers. Site traffic was then assigned to the adjacent street system based upon the anticipated directional distribution.
- Capacity analyses were conducted for the Existing, No Build, and Build conditions for the study intersections.
- The proposed points of ingress and egress were inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.
- The site plan as designed was reviewed for sufficiency in accommodating large wheel base vehicles such as delivery trucks, refuse trucks, and emergency vehicles.
- The parking layout and supply was assessed based on accepted design standards, local requirements, and demand experienced at similar developments.

EXISTING CONDITIONS

A review of the existing roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the development. This included field investigations of the surrounding roadways and intersections, collection of traffic volume data, and extensive analyses.

Existing Roadway Conditions

The following are descriptions of the roadways in the study area:

Fairfax Boulevard (US Route 50) is an Urban Principal Arterial roadway under the jurisdiction of the Virginia Department of Transportation (VDOT) with a general east/west orientation. In the vicinity of the site the posted speed limit is 35 MPH and the roadway provides three travel lanes in each direction. Curb and sidewalk are provided along both sides of the roadway. Fairfax Boulevard provides a relatively flat vertical alignment and straight horizontal alignment along the site frontage with a slight bend to the west of its intersection with Boulevard Marketplace. The land uses along Fairfax Boulevard in the vicinity of The Project are primarily commercial.

Fair Woods Parkway is a local roadway under the jurisdiction of the City of Fairfax with a general north/south orientation. In the vicinity of the site the posted speed limit is 25 MPH and the roadway provides one travel lane in each direction. On-street parking is permitted along both sides of the roadway just north of its intersection with the site driveway. Curb and sidewalk are provided along both sides of the roadway. Fair Woods Parkway provides a relatively flat vertical alignment and straight horizontal alignment along the site frontage with a slight 30° bend to the north of its intersection with the northern site driveway/CVS driveway. The land uses along Fair Woods Parkway in the vicinity of The Project are mixed commercial and residential.

Existing Bicycle and Pedestrian Facilities

Pedestrian and bicycle facilities are provided in the form of a sidewalk along both the eastbound and westbound sides of Fairfax Boulevard (US Route 50). Pedestrian push buttons, curb ramps and associated crosswalks are provided at both adjacent signalized intersections. Further, the George Snyder Trail currently runs along the north and west sides of the site. An extension to the George Snyder Trail is proposed to extend further west to Chain Bridge Road (Route 123).

Existing Mass Transit Facilities

The Washington Metropolitan Area Transit Authority (WMATA) and the City of Fairfax provide bus service in the nearby area. Bus service is provided via the WMATA 1C line, which runs from the Fair Oaks Mall to Dunn Loring Station and via the City of Fairfax CUE Gold 2 and Green 2 lines, which provide service to the Vienna/Fairfax GMU lines. The nearest bus stop is located along the Fairfax Boulevard site frontage.

Scope of Study

A Pre-Scope of Work Meeting Form was submitted to the City for The Project on April 7, 2023. A Scoping Meeting was held with City staff on May 16, 2023 and the Pre-Scope of Work Meeting Form was resubmitted on May 16, 2023. A copy of the finalized Scoping Application is included in Appendix D. Consistent with the scoping application, the following intersections were included as part of the TIS:

- Fairfax Boulevard & Boulevard Marketplace/Gatewood Plaza Driveway
- Fairfax Boulevard WB & Western Right Turn In/Right Turn Out Driveway
- Fairfax Boulevard WB & Eastern Right Turn In/Right Turn Out Driveway
- Fair Woods Parkway & Northern Site Driveway/CVS Driveway
- Fairfax Boulevard & Fair Woods Parkway

Existing Traffic Volumes

Manual turning movement (MTM) counts were conducted on Thursday, April 27, 2023 from 6:00 to 9:00 AM and from 4:00 to 7:00 PM at the following intersections:

- Fairfax Boulevard & Boulevard Marketplace/Gatewood Plaza Driveway
- Fairfax Boulevard WB & Western Right Turn In/Right Turn Out Driveway
- Fairfax Boulevard WB & Eastern Right Turn In/Right Turn Out Driveway
- Fair Woods Parkway & Northern Site Driveway/CVS Driveway
- Fairfax Boulevard & Fair Woods Parkway

Review of the collected traffic data reveals that the weekday morning peak street hour (PSH) occurs between 7:30 - 8:30 AM and the weekday evening PSH occurs between 4:45 - 5:45 PM. Figure 2, located in Appendix A, shows the existing peak hour traffic volumes at the study intersections. All traffic counts are contained in Appendix B.

Existing Capacity Analysis

The methodology utilized in the capacity analyses is described in the *Highway Capacity Manual*, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a “qualitative” evaluation of capacity based upon certain “quantitative” calculations related to empirical values, such as traffic volume and intersection control.

At signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal “green time”, turning percentages, truck volumes, etc. However, delays cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the Level of Service “F” range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle lengths; a particular traffic movement experiences a long red time; or progressive movement for a particular lane group is poor. Table 1 describes the level of service ranges for signalized intersections.

An unsignalized (STOP sign controlled) driveway or side street along a through route is seldom critical from an overall capacity standpoint, however, it may be of great significance to the capacity of the minor cross-route, and it may influence the quality of traffic flow on both. When analyzing an

unsignalized intersection, it is assumed that both the major street through and right turn movements are unimpeded and have the right-of-way over all side street traffic and left turns from the major street. All other turning movements in the intersection cross, merge with, or are otherwise impeded by major street movements. Traffic delays at unsignalized intersections are determined by sequentially processing these impeded movements. Table 2 describes the level of service ranges for unsignalized (stop controlled) intersections.

Table 1
Level of Service Criteria
for Signalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

Table 2
Level of Service Criteria
for Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
a	0.0 to 10.0
b	10.1 to 15.0
c	15.1 to 25.0
d	25.1 to 35.0
e	35.1 to 50.0
f	greater than 50.0

It should be noted that the analyses within the *Highway Capacity Manual* assume a random arrival for all the movements, which may not be the case if an adjacent traffic signal is present that platoons vehicles.

All capacity analyses were performed utilizing Synchro 11 software. It should be noted that the existing percentage of trucks and peak hour factors were used in the existing analysis. Table 3 summarizes the existing levels of service (LOS) and delays. All capacity analysis calculation worksheets are contained in Appendix C.

Table 3
Existing Levels of Service

Intersection	Direction/ Movement		AM PSH	PM PSH
Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway	EB	L	F (98)	F (114)
		TR	A (3)	B (13)
	WB	L	F (93)	F (108)
		TR	A (0)	A (1)
	NB	LT	F (92)	F (306)
		R	F (91)	E (68)
	SB	LT	F (92)	F (115)
		R	F (94)	E (68)
	Overall		A (2)	B (11)
	SB	R	c (17)	c (22)
Fairfax Boulevard and Eastern Site Driveway	SB	R	b (14)	c (20)
Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway	EB	L	F (92)	F (106)
		TR	A (1)	A (1)
	WB	L	F (94)	F (139)
		T	A (7)	A (10)
	NB	LTR	E (74)	F (92)
	SB	LT	F (85)	F (102)
	Overall		A (8)	B (12)
Fair Woods Parkway and Northern Site Driveway/CVS Driveway	EB	LTR	a (10)	a (10)
	WB	LTR	b (11)	b (11)
	NB	LTR	a (8)	a (8)
	SB	LTR	a (7)	a (8)

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

The following are discussions pertaining to each of the existing intersections analyzed.

Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway

Boulevard Marketplace and the Gatewood Plaza Driveway intersect Fairfax Boulevard to form a four-leg intersection controlled by a traffic signal. The signal timing directive was obtained from the City of Fairfax which indicates that a three-phase 190-second background cycle length is utilized during the weekday morning peak hour and a three-phase 220-second background cycle is utilized during the weekday evening peak hour (the traffic signal timing directive is included in Appendix B)

The eastbound and westbound approaches of Fairfax Boulevard both provide one dedicated left turn lane, two dedicated through lanes, and one shared through/right turn lane. The northbound approach of the Gatewood Plaza Driveway provides one shared left turn/through lane and one dedicated right turn lane. The southbound approach of Boulevard Marketplace provides one shared left turn/through lane and one dedicated right turn lane.

A review of the existing analysis reveals that the intersection operates at overall levels of service “B” or better during the analyzed peak periods. Several individual intersection movements operate at level of service “F” during the analyzed peak periods, primarily due to the existing long cycle lengths, including the eastbound left turn movement, westbound left turn movement, northbound left turn/through movement and the southbound left turn/through movement during both analyzed peak periods and the northbound right turn movement and southbound right turn movement during the weekday morning peak period. See Table 3 for the individual movement levels of service and delays.

Fairfax Boulevard and Western Site Driveway

The Western Site Driveway intersects Fairfax Boulevard just south of the 7-Eleven to form a T-intersection with the southbound approach of the site driveway operating under stop control. The westbound approach of Fairfax Boulevard provides two dedicated through lanes and one shared through/right turn lane. The southbound approach of the site driveway proves one dedicated right turn lane.

A review of the existing analysis reveals that all movements operate at levels of service “C” during the analyzed peak periods. See Table 3 for the individual movement levels of service and delays.

Fairfax Boulevard and Eastern Site Driveway

The Eastern Site Driveway intersects Fairfax Boulevard just south of the Patient First to form a T-intersection with the southbound approach of the site driveway operating under stop control. The westbound approach of Fairfax Boulevard provides two dedicated through lanes and one shared through/right turn lane. The southbound approach of the site driveway proves one dedicated right turn lane.

A review of the existing analysis reveals that all movements operate at levels of service “C” or better during the analyzed peak periods. See Table 3 for the individual movement levels of service and delays.

Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway

Fair Woods Parkway and the Fire Station #33 Driveway intersect Fairfax Boulevard to form a four-leg intersection controlled by a traffic signal. The signal timing directive was obtained from the City of Fairfax which indicates that a three-phase 190-second background cycle length is utilized during the weekday morning peak hour and a three-phase 220-second background cycle is utilized during the weekday evening peak hour (the traffic signal timing directive is included in Appendix B).

The eastbound approach of Fairfax Boulevard provides one dedicated left turn lane, two dedicated through lanes, and one shared through/right turn lane. The westbound approach of Fairfax Boulevard provides one dedicated left turn lane, three dedicated through lanes and one dedicated right turn lane. The northbound approach of the Fire Station driveway provides one shared left turn/through/right turn lane. The southbound approach of Boulevard Marketplace provides one shared left turn/through lane and one dedicated, channelized right turn lane.

A review of the existing analysis reveals that the intersection operates at overall levels of service “B” or better during the analyzed peak periods. Several individual intersection movements operate at level of service “F” during the analyzed peak periods, primarily due to the existing long cycle lengths,

including the eastbound left turn movement, westbound left turn movement and southbound left turn/through movement during both analyzed peak periods and the northbound approach during the weekday evening peak period. See Table 3 for the individual movement levels of service and delays.

Fair Woods Parkway and Northern Site Driveway/CVS Driveway

The Northern Site Driveway and CVS Driveways intersects Fair Woods Parkway to form a four-leg intersection with the eastbound and westbound approaches operating under stop control. The eastbound approach of the northern site driveway and the westbound approach of the CVS Driveway both provide one shared left turn/through/right turn lane. The northbound approach of Fair Woods Parkway provides a shared left turn/through lane and a dedicated right turn lane, while the southbound approach provides a shared left turn/through/right turn lane.

A review of the existing analysis reveals that all movements operate at levels of service “B” or better during the analyzed peak periods. See Table 3 for the individual movement levels of service and delays.

FUTURE CONDITIONS

Traffic volumes and operational analyses were developed for both the 2025 No Build and Build conditions. The No Build conditions provide a baseline for assessing the impact of the site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. A growth rate of 1% for roadways within the study area was confirmed with the City of Fairfax staff during the Scoping Meeting.

Through consultation with the City of Fairfax staff, there are two other developments in the vicinity of the site that are identified as significant traffic generators. It was assumed that the background growth rate was adequate to account for the traffic associated with all developments not listed hereafter.

- A development consisting of 268 apartments and 50 townhomes, known as N29 Willowwood, located along the north side of Eaton Place between Chain Bridge Road (Route 123) and Fairfax Boulevard. Projections of the associated traffic volumes were taken from the *Traffic Impact Study*, prepared by Wells & Associates, dated April 28, 2023. The Adjacent Development Traffic Volumes passing the site are shown on Figure 3.
- A two-phase development, known as Northfax West, consisting of 56 multi-family residential units and 200 continuing care retirement community units in Phase 1 and 25,000 SF of commercial uses, 180 residential dwelling units and a 140-room hotel in Phase 2, located in the northwest quadrant of the intersection of Fairfax Boulevard and Chain Bridge Road (Route 123). Projections of the associated traffic volumes were taken from the *Traffic Impact Study*, prepared by Gorove Slade Transportation Planners and Engineers, dated January 2, 2020, last revised April 30, 2020. The Adjacent Development Traffic Volumes passing the site are shown on Figures 4 and 5.

Future 2025 No Build traffic volumes were developed by applying the background growth rate of 1.0% for two (2) years to the study area roadways existing traffic volumes and adding the adjacent development traffic volumes. Figure 6, in Appendix A, shows the 2025 No Build traffic volumes.

Traffic Generation

Trip generation projections for The Project were prepared utilizing trip generation research data as published under Land Use Code 934 – Fast-Food Restaurant with Drive-Through Window in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, 11th Edition*. This publication sets forth trip generation rates based on empirical traffic count data conducted at numerous research sites. Table 4 summarizes the projected trip generation during the peak street hours. Note that no credit for passby trips for the proposed Fast-Food Restaurant was taken within the study.

Table 4
Trip Generation

Land Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
2,256 SF Taco Bell Restaurant	52	49	101	39	36	75

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of new traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Figures 7 and 8, located in Appendix A, illustrate the Traffic Trip Distribution and Site Generated Volumes, respectively. The Site Generated Volumes assigned to the study area network were added to the No Build traffic volumes to generate the Build traffic volumes, which are shown in Figure 9.

Future Capacity Analysis

Operational conditions at the study intersections were analyzed under the No Build and Build conditions and are summarized in Table 5 below.

Table 5
Future Levels of Service

Intersection	Direction/ Movement	AM PSH		PM PSH	
		No Build	Build	No Build	Build
Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway	EB	L	F (98)	F (100)	F (114)
		TR	A (3)	A (6)	B (13)
	WB	L	F (93)	F (93)	F (108)
		TR	A (0)	A (0)	A (1)
	NB	LT	F (92)	F (95)	F (317)
		R	F (91)	F (80)	E (68)
	SB	LT	F (92)	F (99)	F (115)
		R	F (94)	F (81)	E (68)
	Overall	A (3)	A (5)	B (11)	B (12)
Fairfax Boulevard and Western Site Driveway	SB	R	c (18)	c (19)	c (24)
Fairfax Boulevard and Eastern Site Driveway	SB	R	b (14)	b (15)	b (21)
Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway	EB	L	F (92)	F (92)	F (106)
		TR	A (1)	A (1)	A (1)
	WB	L	F (94)	F (94)	F (139)
		T	A (7)	A (8)	B (11)
	NB	LTR	E (74)	E (73)	F (92)
	SB	LT	F (85)	F (84)	F (102)
	Overall	A (8)	A (8)	B (12)	B (13)
Fair Woods Parkway and Northern Site Driveway/CVS Driveway	EB	LTR	a (10)	a (10)	a (10)
	WB	LTR	b (11)	b (11)	b (11)
	NB	LTR	a (8)	a (8)	a (8)
	SB	LTR	a (7)	a (7)	a (8)

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway

With the addition of site generated traffic, the intersection is anticipated to operate at overall intersection levels of service “B” or better with minor changes in the delay during the analyzed peak hours. See Table 5 for the individual movement levels of service and delays.

Fairfax Boulevard and Western Site Driveway

With the addition of site generated traffic, the driveway is anticipated to operate at No Build levels of service “C”. See Table 5 for the individual movement levels of service and delays.

Fairfax Boulevard and Eastern Site Driveway

With the addition of site generated traffic, the driveway is anticipated to operate at levels of service “C” or better. See Table 5 for the individual movement levels of service and delays.

Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway

With the addition of site generated traffic, the intersection is anticipated to operate at overall intersection levels of service “B” or better with minor changes in the delay during the analyzed peak hours. See Table 5 for the individual movement levels of service and delays.

Fairfax Boulevard and Northern Site Driveway

With the addition of site generated traffic, each movement is anticipated to operate at No Build levels of service “B” or better. See Table 5 for the individual movement levels of service and delays.

Queue Analysis

Queue length conditions at the study intersections were analyzed under the No Build and Build conditions. The 95th percentile queues for each study peak hour are summarized in Table 6 below.

**Table 6
2025 Queue Analysis**

Intersection	Direction/ Movement	Storage Length	AM PSH		PM PSH	
			No Build	Build	No Build	Build
Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway	EB	L	245'	23'	93'	65'
		TR	-	180'	333'	408'
	WB	L	150'	18'	18'	10'
		TR	-	3'	3'	20'
	NB	LT	-	3'	3'	173'
		R	-	5'	5'	48'
	SB	LT	-	3'	30'	28'
		R	60'	18'	25'	18'
	SB	R	-	8'	10'	8'
	SB	R	-	0'	3'	5'
Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway	EB	L	400'	115'	115'	298'
		TR	-	10'	10'	10'
	WB	L	55'	3'	3'	5'
		T	-	213'	225'	450'
	NB	LTR	-	5'	5'	3'
	SB	LT	-	283'	303'	240'
Fair Woods Parkway and Northern Site Driveway/CVS Driveway	EB	LTR	-	0'	3'	3'
	WB	LTR	-	0'	0'	5'

Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway

With the addition of site generated traffic, there is anticipated to be a minimal increase in the 95th percentile queues at the intersection. See Table 6 for the individual movement 95th percentile queues.

Fairfax Boulevard and Western Site Driveway

With the addition of site generated traffic, there is anticipated to be a minimal increase in the 95th percentile queues at the intersection. See Table 6 for the individual movement 95th percentile queues.

Fairfax Boulevard and Eastern Site Driveway

With the addition of site generated traffic, there is anticipated to be a minimal increase in the 95th percentile queues at the intersection. See Table 6 for the individual movement 95th percentile queues.

Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway

With the addition of site generated traffic, there is anticipated to be a minimal increase in the 95th percentile queues at the intersection. See Table 6 for the individual movement 95th percentile queues.

Fairfax Boulevard and Northern Site Driveway

With the addition of site generated traffic, there is anticipated to be a minimal increase in the 95th percentile queues at the intersection. See Table 6 for the individual movement 95th percentile queues.

SITE PLAN

Site Access and Circulation

The site plan was reviewed with respect to the site access and on-site circulation design. As noted previously, access to The Project will continue to be provided via one full movement, signalized driveway and two right in/right out driveways along Fairfax Boulevard (US Route 50) and one full movement driveway along Fair Woods Parkway.

The parking lot will be serviced by parking aisles with a width of 23', which satisfy the City's requirement of 23'. These aisles will allow for two-way circulation and 90-degree parking. Review of the site plan design indicates that the site can sufficiently accommodate a large wheel base vehicle, such as a fire truck and trash truck along with the automobile traffic anticipated.

Parking

The City of Fairfax Site Development Standards set forth a parking requirement of 1 parking space per 200 square feet for restaurants. This equates to a parking requirement of 11 spaces for the proposed 2,256 SF Taco Bell Restaurant. The site as proposed provides 21 parking spaces, inclusive of two handicap spaces, and the Ordinance requirement is satisfied.

It is proposed to provide parking stalls with dimensions of 9'x18', which satisfy the minimum requirement of 9'x18'.

FINDINGS & CONCLUSIONS

Findings

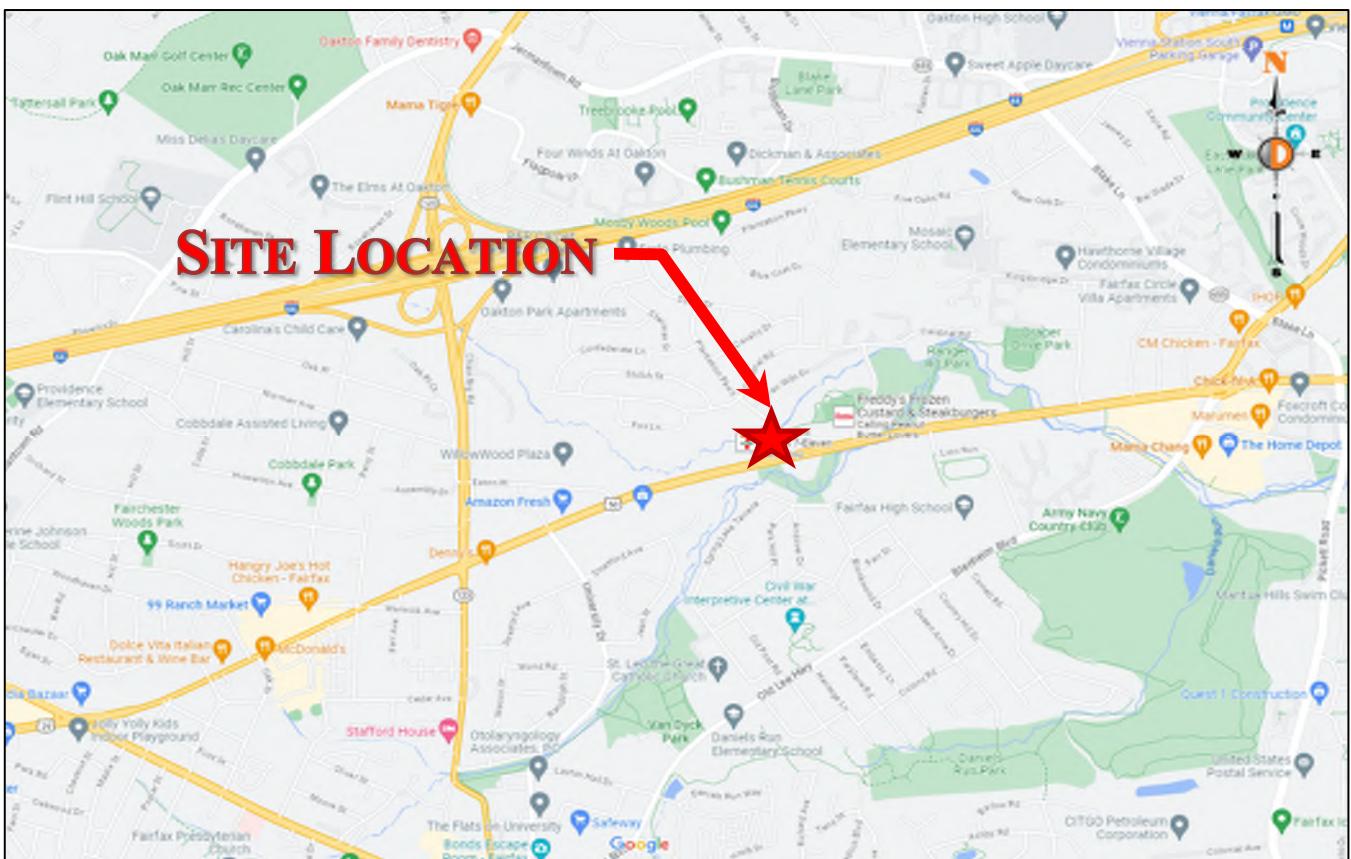
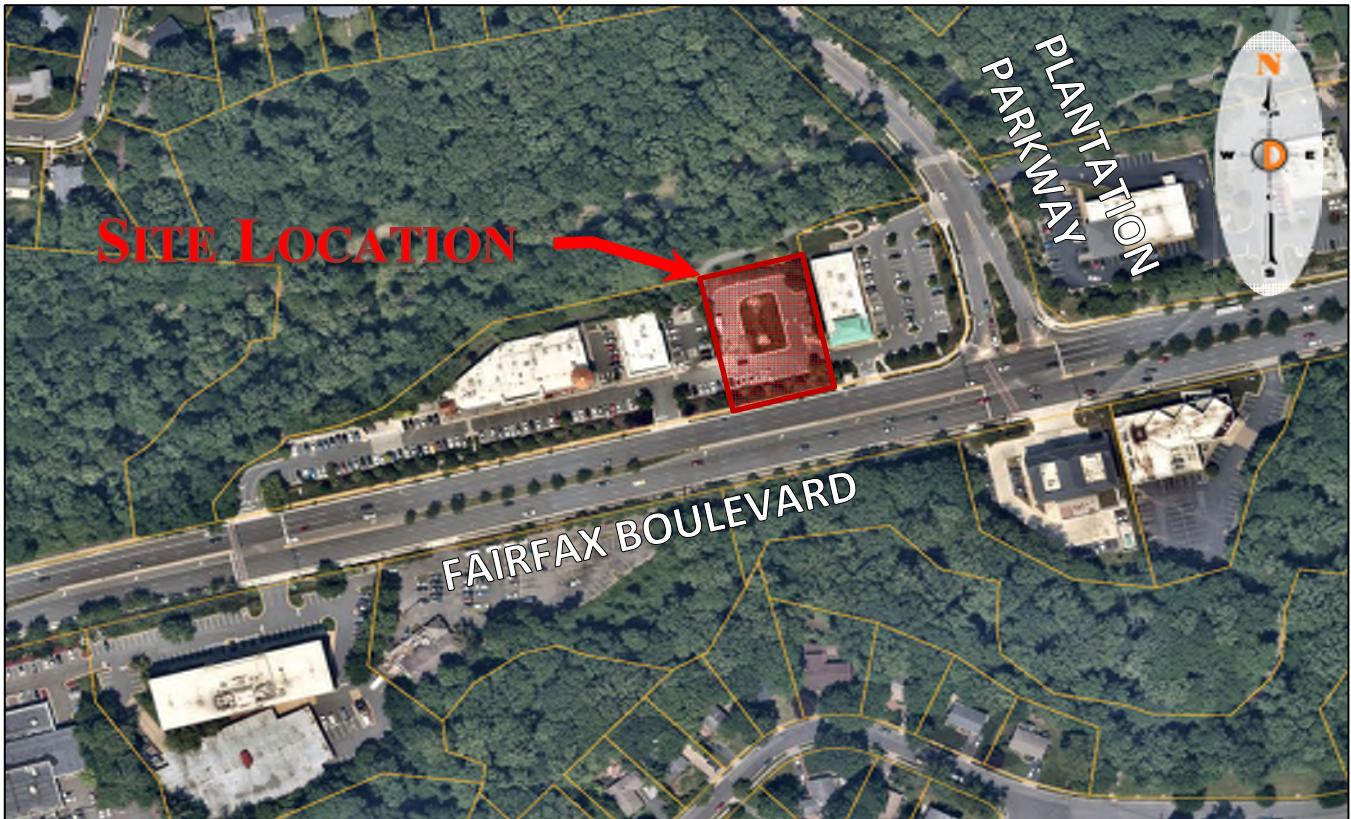
Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed 2,256 SF Taco Bell Restaurant is projected to generate 52 entering trips and 49 exiting trips during the weekday morning peak hour and 39 entering trips and 36 exiting trips during the evening peak hour.
- Access to the site will continue to be provided via one full movement, signalized driveway and two right in/right out driveways along Fairfax Boulevard (US Route 50) and one full movement driveway along Fair Woods Parkway.
- With the addition of site generated traffic, the intersection of Fairfax Boulevard and Boulevard Marketplace/Gatewood Plaza Driveway is anticipated to operate at overall levels of service “B” or better during the peak hours studied with minor changes in delay.
- With the addition of site generated traffic, the intersection of Fairfax Boulevard and the Western Site Driveway is anticipated to operate at levels of service “C” during the peak hours studied.
- With the addition of site generated traffic, the intersection of Fairfax Boulevard and the Eastern Site Driveway is anticipated to operate at levels of service “C” or better during the peak hours studied.
- With the addition of site generated traffic, the intersection of Fairfax Boulevard and Fair Woods Parkway/Fire Station #33 Driveway is anticipated to operate at overall levels of service “B” or better during the peak hours studied with minor changes in delay.
- With the addition of site generated traffic, the intersection of Fair Woods Parkway and Northern Site Driveway/CVS Driveway is anticipated to operate at levels of service “B” or better during the peak hours studied.
- As proposed, The Project’s site driveways and internal circulation have been designed to provide for safe and efficient movement of automobiles and large wheel base vehicles.
- The proposed parking supply and design is sufficient to support the projected demand and satisfies the City requirements.

Conclusions

Based upon our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Dynamic Traffic LLC that the adjacent street system of the City of Fairfax and VDOT will not experience any significant degradation in operating conditions with the construction of The Project. The site driveways are located to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for good circulation throughout the site and provides adequate parking to accommodate The Project’s needs.

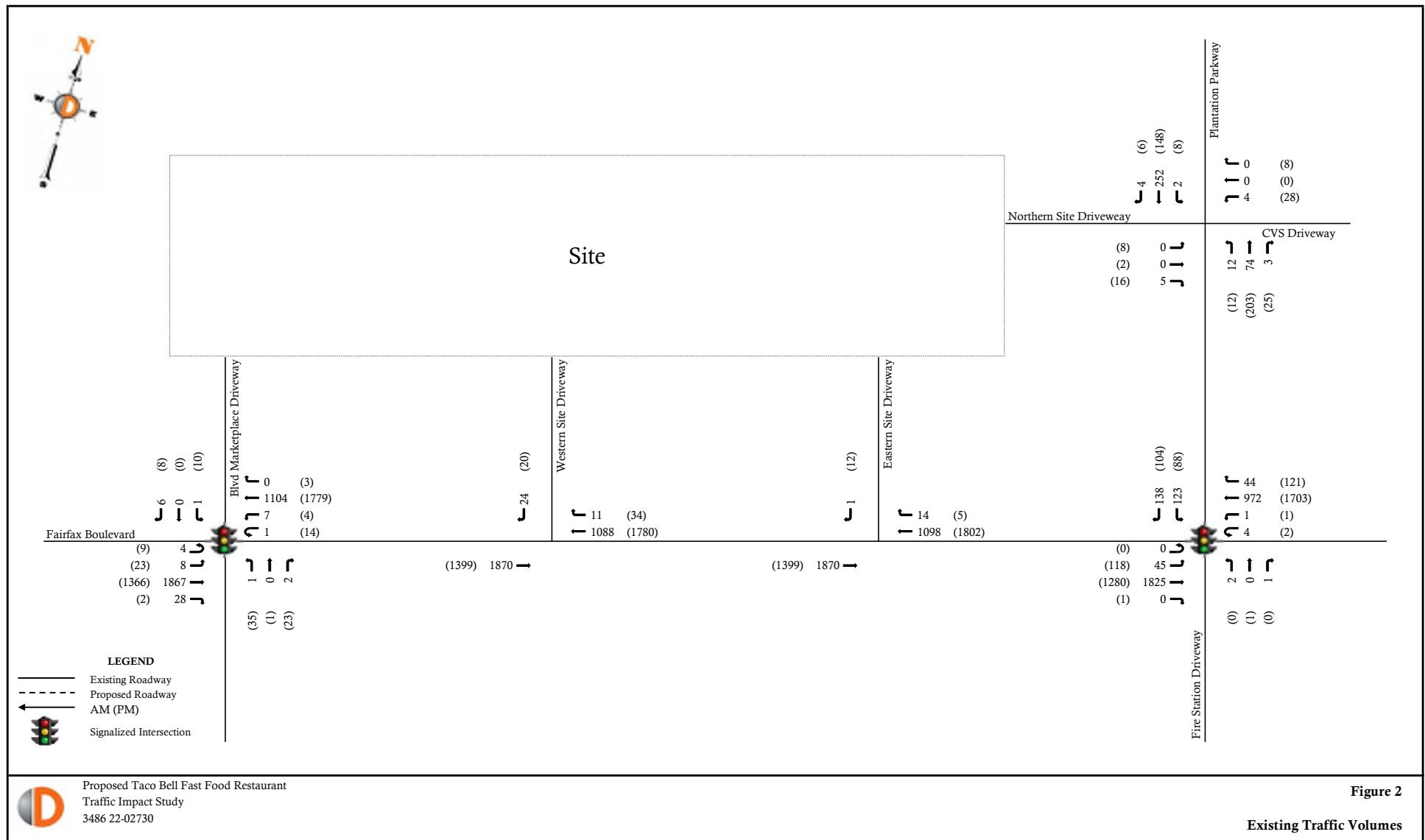
Appendix A
Traffic Volume Figures

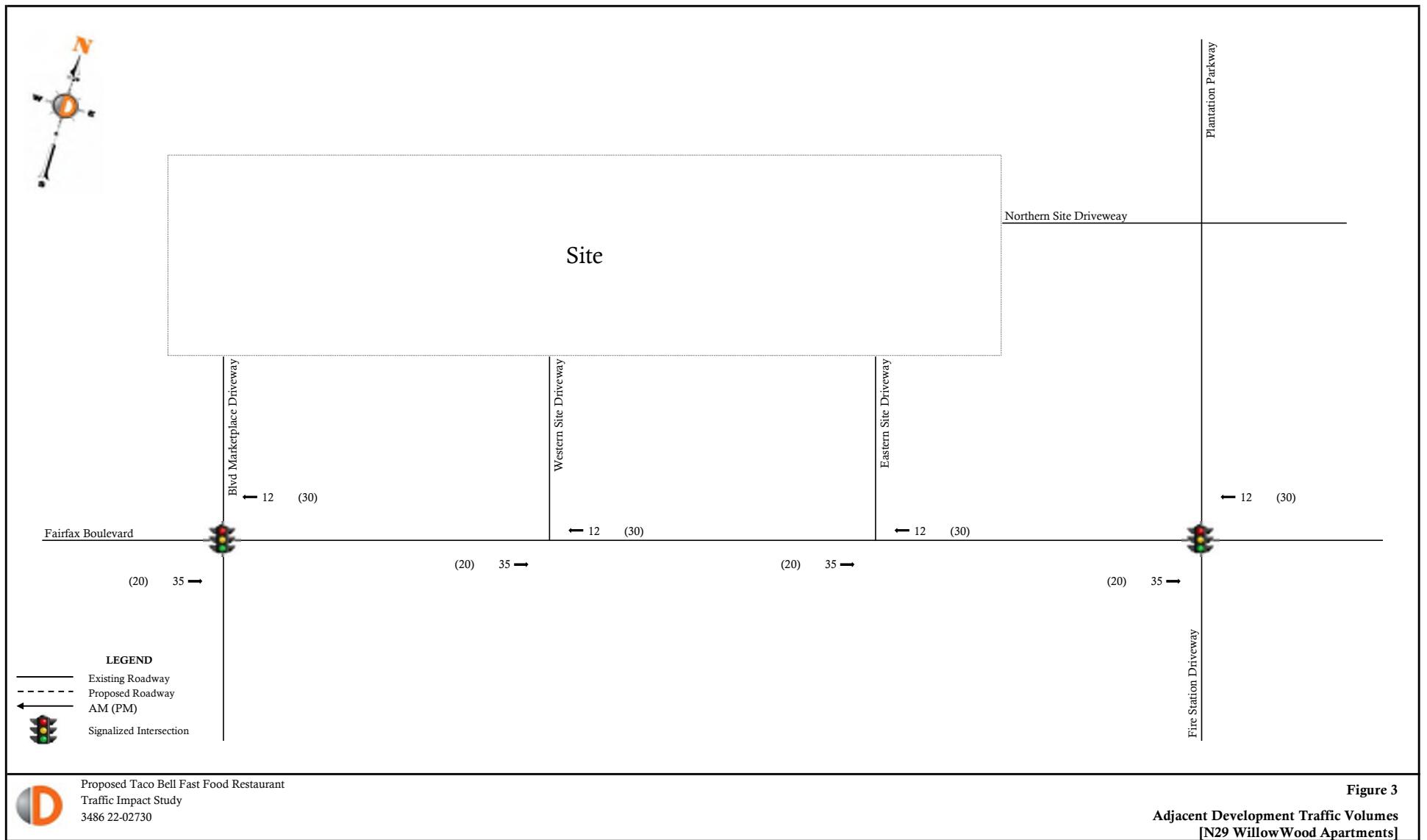


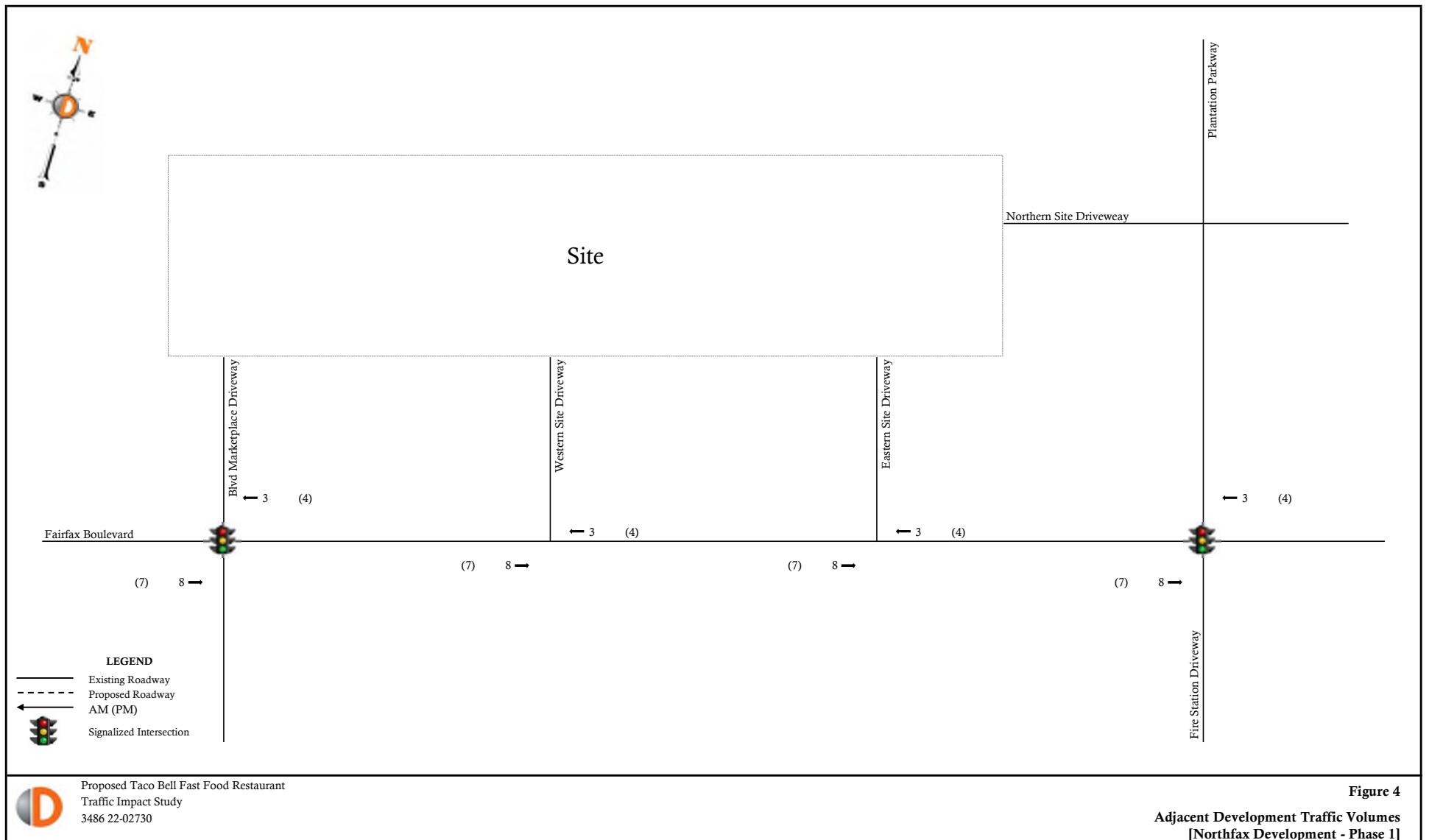
Proposed Taco Bell Fast Food Restaurant
Traffic Impact Study
3486 22-02730

Figure 1

Site Location Map







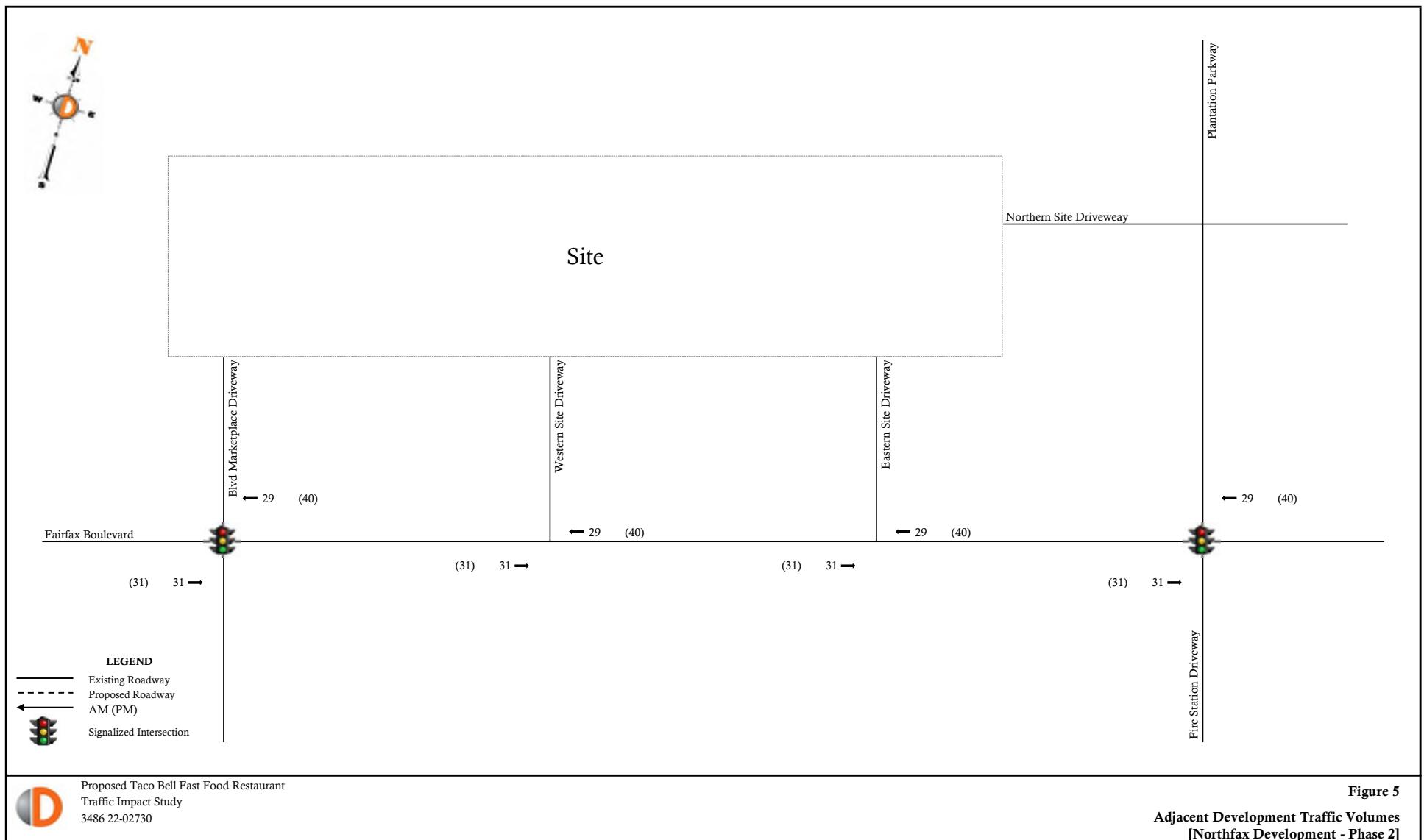
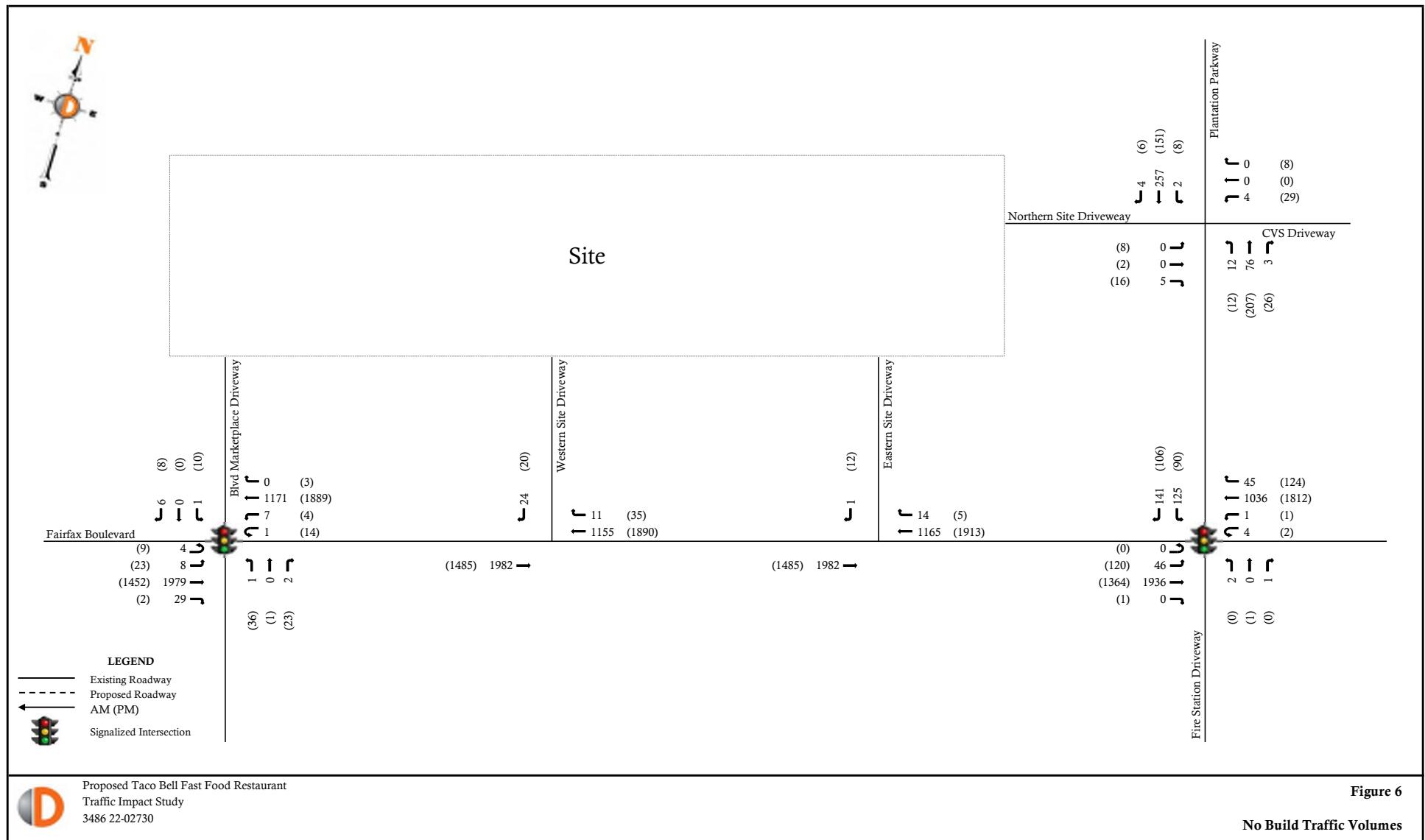


Figure 5
Adjacent Development Traffic Volumes
[Northfax Development - Phase 2]



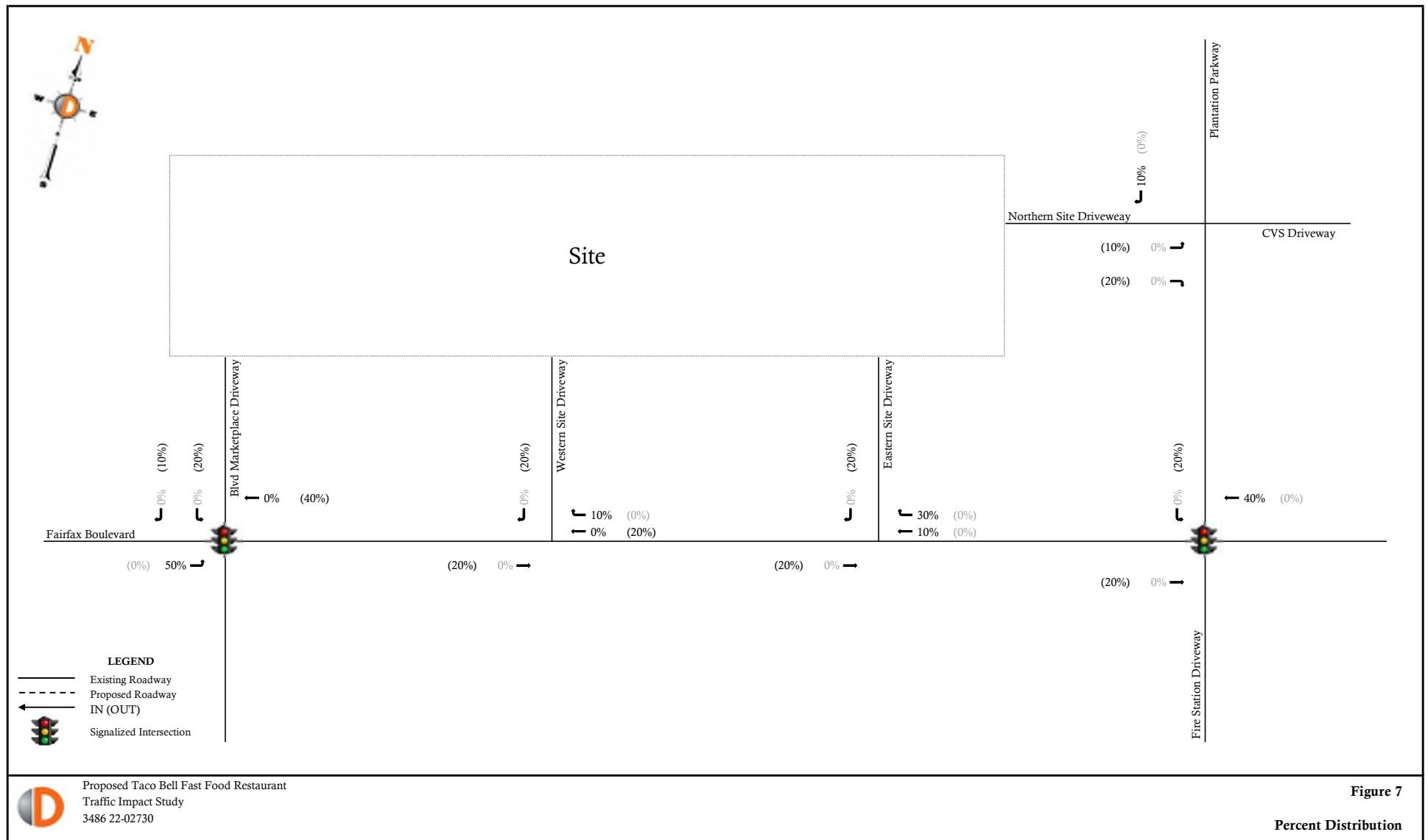
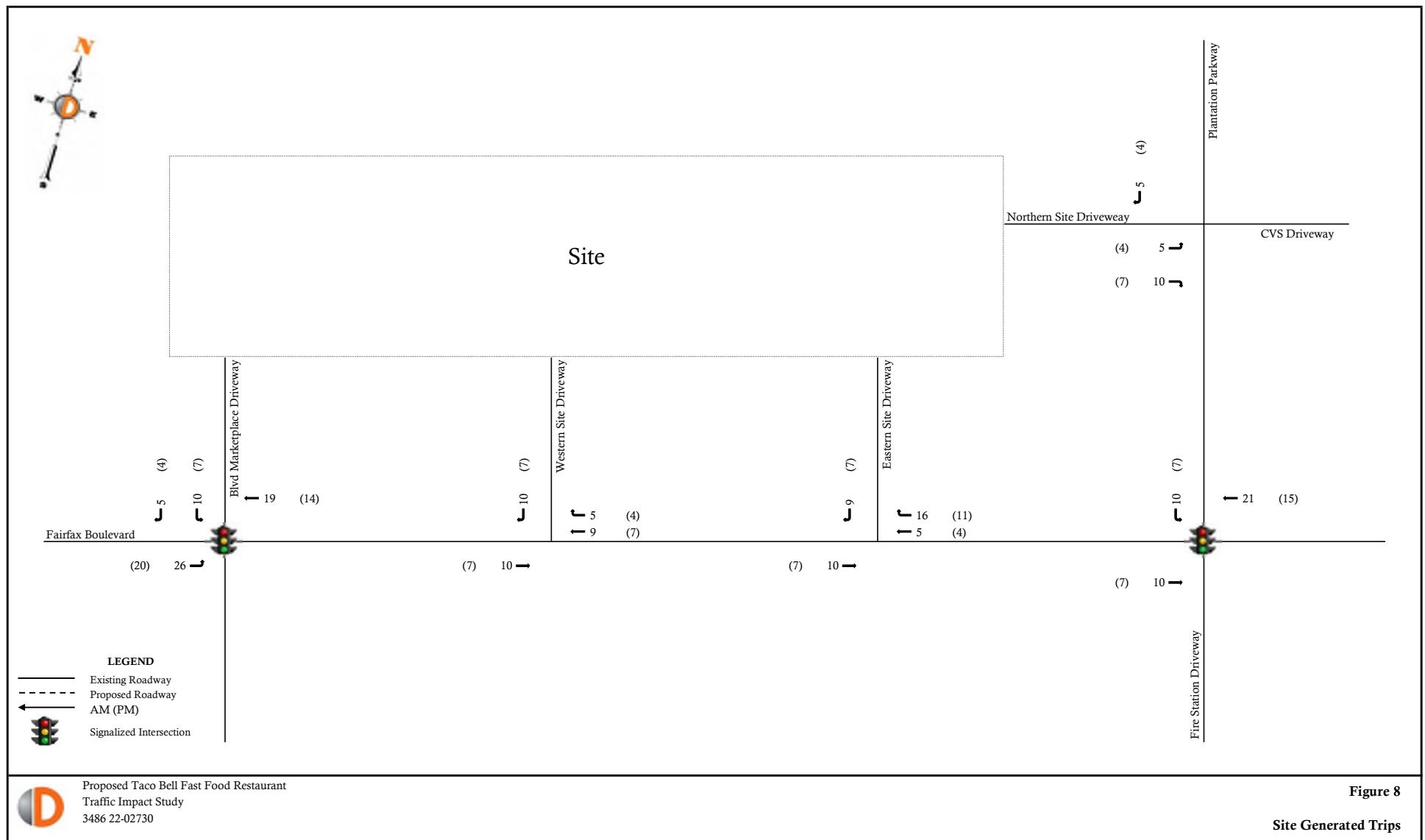
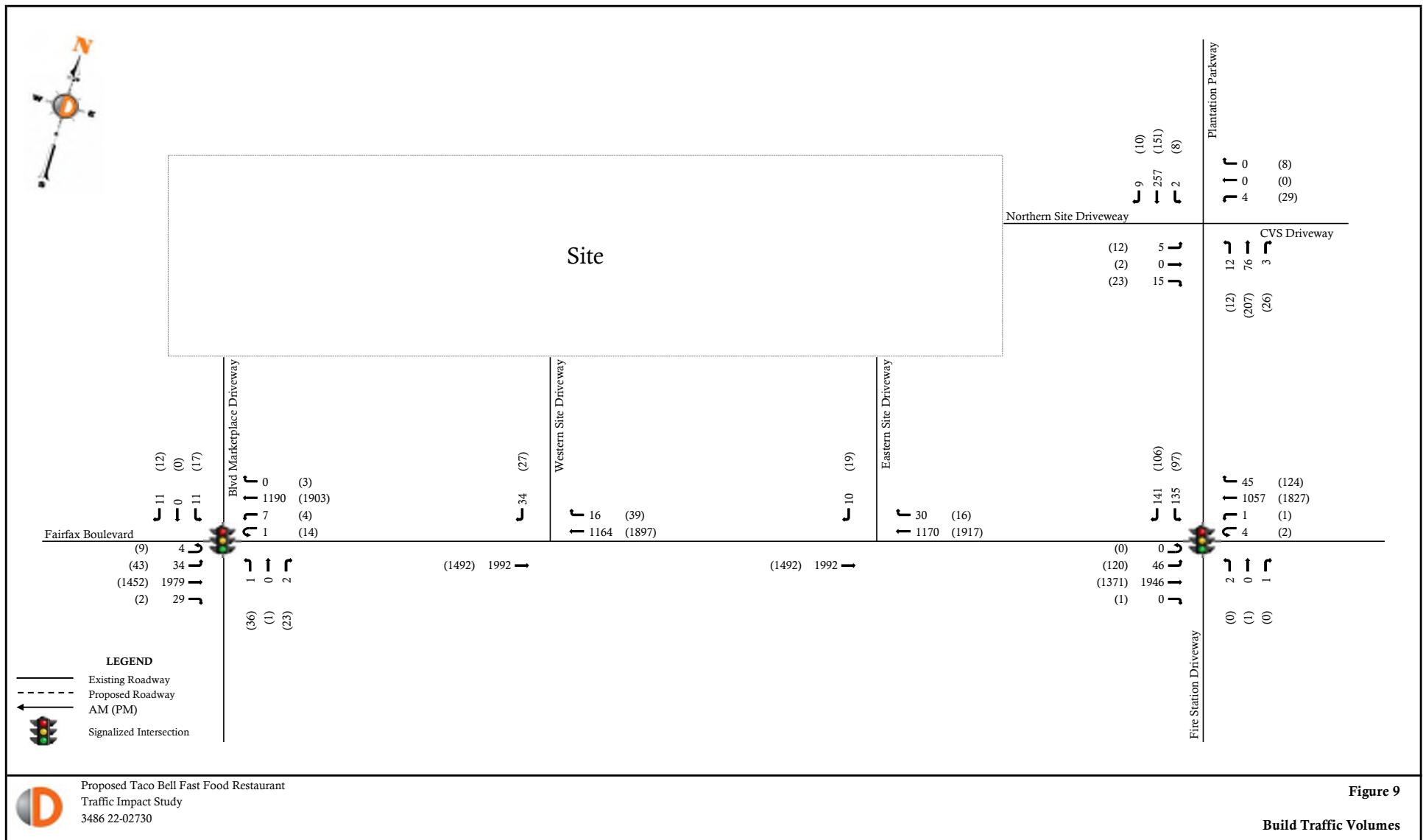


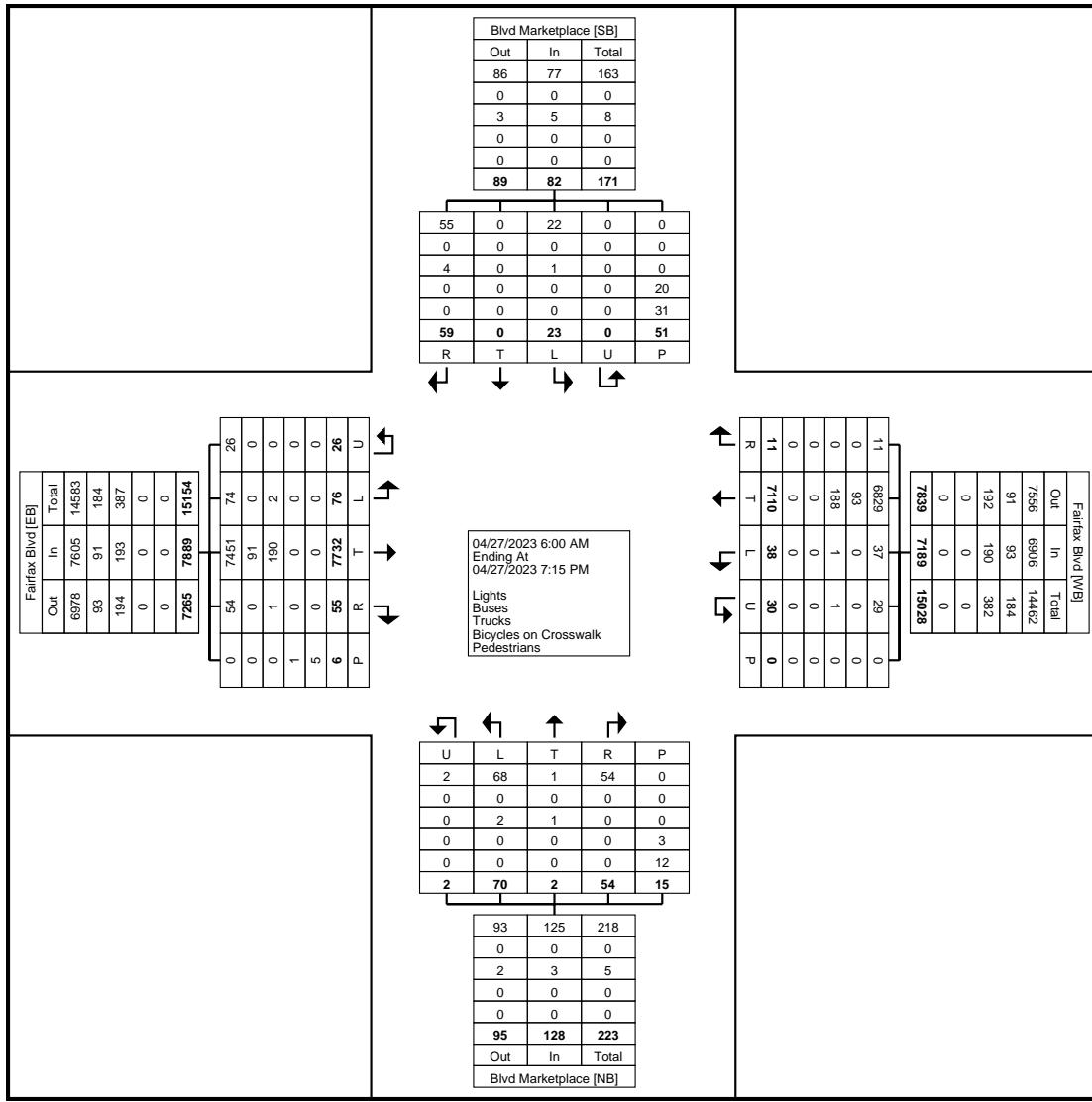
Figure 7
Percent Distribution





Appendix B

Project Information



Turning Movement Data Plot



www.TSTDData.com
184 Baker Rd

Fairfax, VA
Fairfax Blvd & Blvd Marketplace
Thursday, April 27, 2023
Location: 38.861456, -77.297268

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Fairfax Boulevard & Blvd Marketplace
Site Code:
Start Date: 04/27/2023
Page No: 3

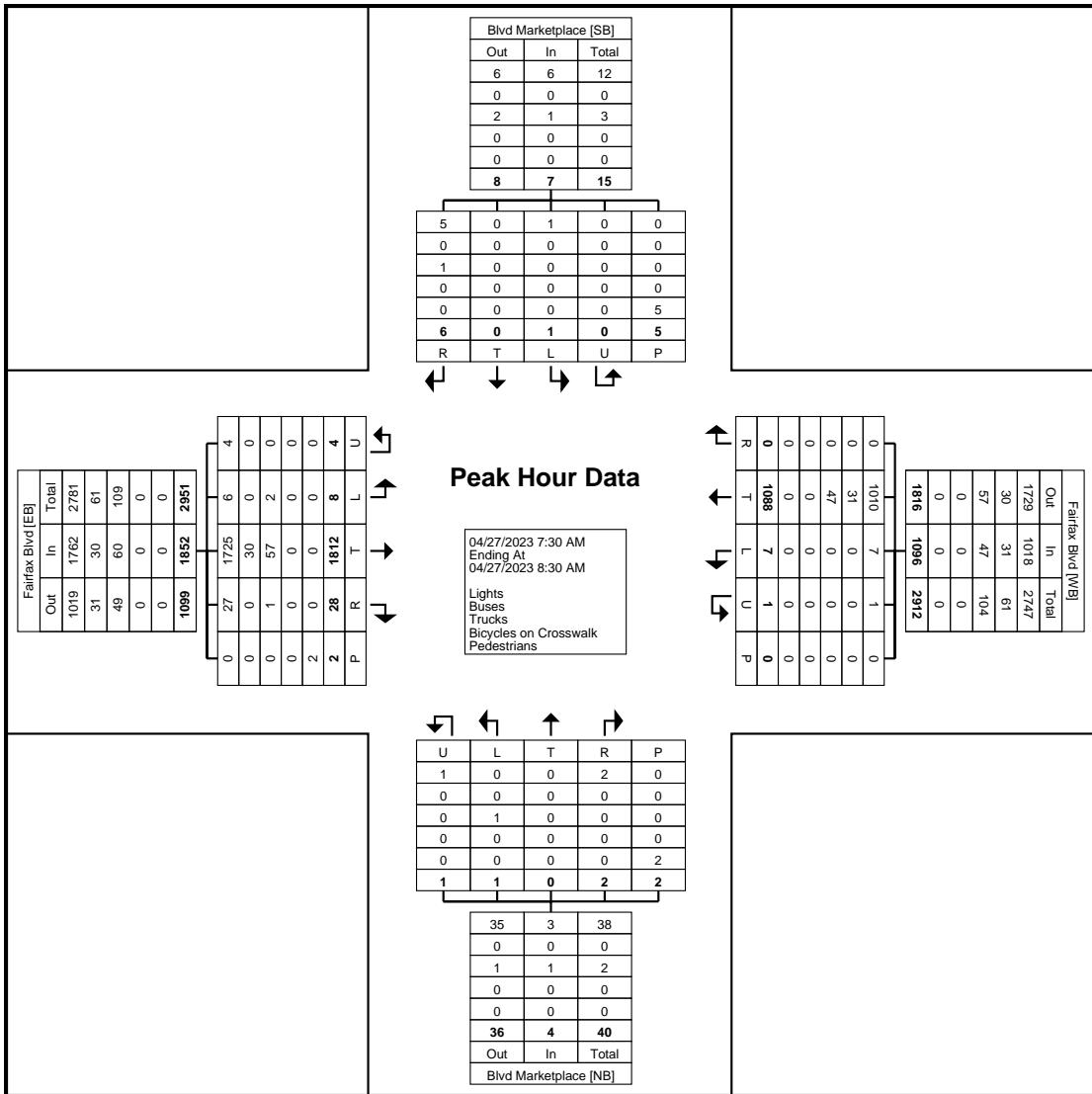
Turning Movement Peak Hour Data (7:30 AM)

Start Time	Fairfax Blvd Eastbound							Fairfax Blvd Westbound							Blvd Marketplace Northbound							Blvd Marketplace Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	0	469	2	0	0	0	471	2	223	0	0	0	0	225	0	0	0	0	0	0	0	0	0	1	0	0	1	697	
7:45 AM	4	526	6	0	1	0	537	3	288	0	0	0	0	291	0	0	0	0	0	0	0	0	1	1	0	0	0	2	830
8:00 AM	1	486	6	0	3	1	496	0	320	0	0	1	0	321	0	0	0	1	1	1	2	0	0	0	1	0	4	1	820
8:15 AM	3	331	12	2	0	1	348	2	257	0	0	0	0	259	1	0	0	1	0	1	2	1	0	0	2	0	1	3	612
Total	8	1812	26	2	4	2	1852	7	1088	0	0	1	0	1096	1	0	0	2	1	2	4	1	0	1	5	0	5	7	2959
Approach %	0.4	97.8	1.4	0.1	0.2	-	-	0.6	99.3	0.0	0.0	0.1	-	-	25.0	0.0	0.0	50.0	25.0	-	-	14.3	0.0	14.3	71.4	0.0	-	-	-
Total %	0.3	61.2	0.9	0.1	0.1	-	62.6	0.2	36.8	0.0	0.0	0.0	-	37.0	0.0	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.2	0.0	-	0.2	-	
PHF	0.50	0.861	0.542	0.250	0.333	-	0.862	0.583	0.850	0.000	0.000	0.250	-	0.854	0.250	0.000	0.000	0.500	0.250	-	0.500	0.250	0.000	0.250	0.625	0.000	-	0.583	0.891
Lights	6	1725	26	1	4	-	1762	7	1010	0	0	1	-	1018	0	0	0	2	1	-	3	1	0	0	5	0	-	6	2789
% Lights	75.0	95.2	100.0	50.0	100.0	-	95.1	100.0	92.8	-	-	100.0	-	92.9	0.0	-	-	100.0	100.0	-	75.0	100.0	-	0.0	100.0	-	-	85.7	94.3
Buses	0	30	0	0	0	-	30	0	31	0	0	0	-	31	0	0	0	0	0	-	0	0	0	0	0	0	-	0	61
% Buses	0.0	1.7	0.0	0.0	0.0	-	1.6	0.0	2.8	-	-	0.0	-	2.8	0.0	-	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0	-	0.0	2.1	
Trucks	2	57	0	1	0	-	60	0	47	0	0	0	-	47	1	0	0	0	0	-	1	0	0	1	0	0	-	1	109
% Trucks	25.0	3.1	0.0	50.0	0.0	-	3.2	0.0	4.3	-	-	0.0	-	4.3	100.0	-	-	0.0	0.0	-	25.0	0.0	-	100.0	0.0	-	-	14.3	3.7
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Fairfax Blvd & Blvd Marketplace
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77.297268

Coatesville, Pennsylvania, United States 19320
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Count Name: Fairfax Boulevard
& Blvd Marketplace
Site Code:
Start Date: 04/27/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:30 AM)



www.TSTData.com
184 Baker Rd

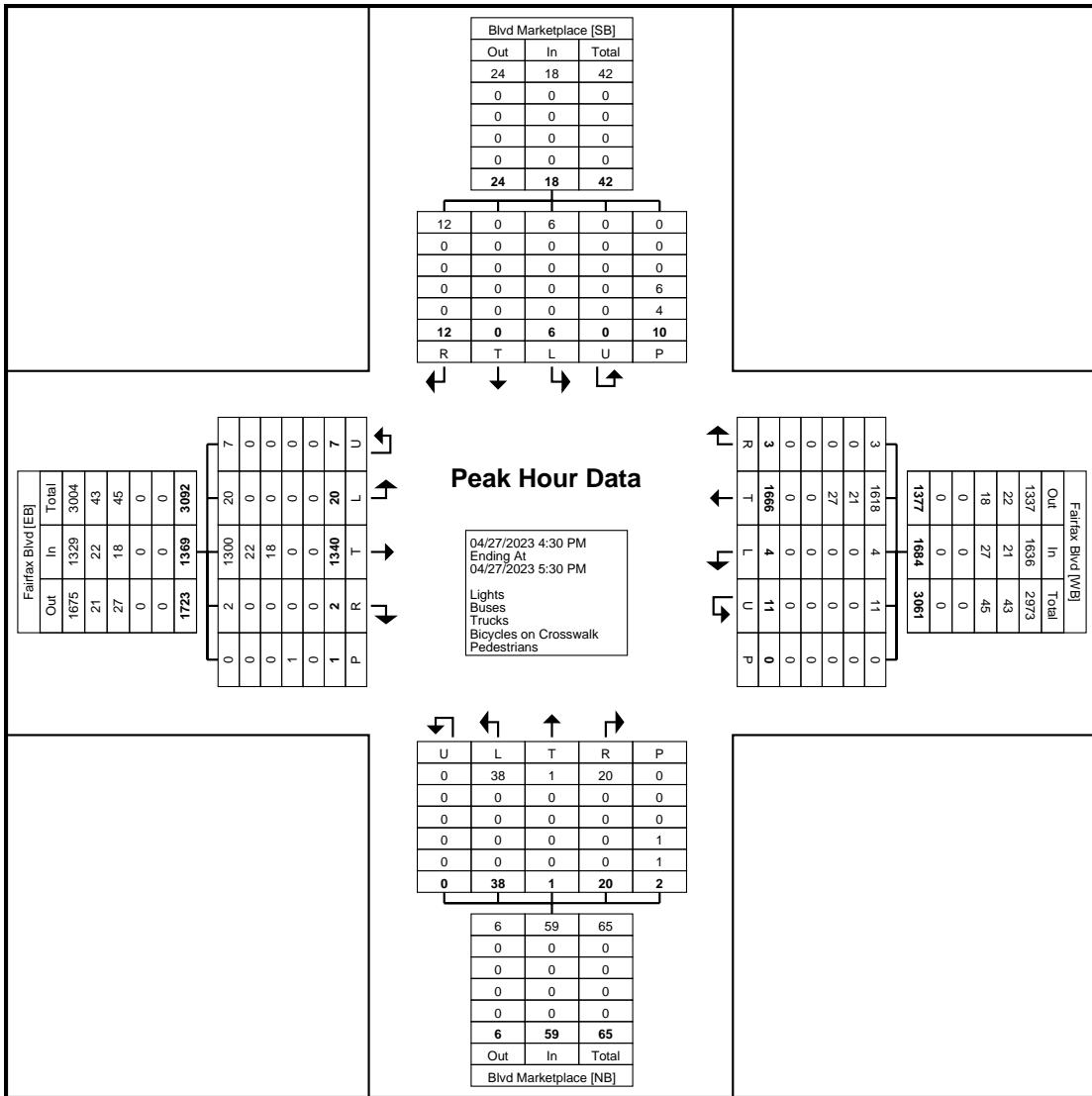
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Count Name: Fairfax Boulevard & Blvd Marketplace
Site Code:
Start Date: 04/27/2023
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Fairfax Blvd Eastbound							Fairfax Blvd Westbound							Blvd Marketplace Northbound							Blvd Marketplace Southbound							Int. Total	
	Left	Thru	Right	Right on Red	U-Turn	Ped	App. Total	Left	Thru	Right	Right on Red	U-Turn	Ped	App. Total	Left	Thru	Right	Right on Red	U-Turn	Ped	App. Total	Left	Thru	Right	Right on Red	U-Turn	Ped	App. Total		
4:30 PM	5	349	0	0	1	0	355	1	446	0	0	0	0	447	7	0	1	5	0	1	13	1	0	1	5	0	5	7	822	
4:45 PM	5	313	0	0	2	0	320	1	437	1	0	4	0	443	10	0	1	2	0	0	13	1	0	0	1	0	1	2	778	
5:00 PM	7	328	0	0	3	0	338	0	390	1	0	4	0	395	9	1	2	3	0	0	15	2	0	2	0	0	2	4	752	
5:15 PM	3	350	2	0	1	1	356	2	393	1	0	3	0	399	12	0	1	5	0	1	18	2	0	2	1	0	2	5	778	
Total	20	1340	2	0	7	1	1369	4	1666	3	0	11	0	1684	38	1	5	15	0	2	59	6	0	5	7	0	10	18	3130	
Approach %	1.5	97.9	0.1	0.0	0.5	-	-	0.2	98.9	0.2	0.0	0.7	-	-	64.4	1.7	8.5	25.4	0.0	-	-	33.3	0.0	27.8	38.9	0.0	-	-	-	
Total %	0.6	42.8	0.1	0.0	0.2	-	43.7	0.1	53.2	0.1	0.0	0.4	-	53.8	1.2	0.0	0.2	0.5	0.0	-	1.9	0.2	0.0	0.2	0.2	0.0	-	0.6	-	
PHF	0.71	0.957	0.250	0.000	0.583	-	0.961	0.500	0.934	0.750	0.000	0.688	-	0.942	0.792	0.250	0.625	0.750	0.000	-	0.819	0.750	0.000	0.625	0.350	0.000	-	0.643	0.952	
Lights	20	1300	2	0	7	-	1329	4	1618	3	0	11	-	1636	38	1	5	15	0	-	59	6	0	5	7	0	-	18	3042	
% Lights	100.0	97.0	100.0	-	100.0	-	97.1	100.0	97.1	100.0	-	100.0	-	97.1	100.0	100.0	100.0	100.0	-	-	100.0	100.0	-	100.0	100.0	-	-	100.0	97.2	
Buses	0	22	0	0	0	-	22	0	21	0	0	0	-	21	0	0	0	0	0	-	0	0	0	0	0	0	-	0	43	
% Buses	0.0	1.6	0.0	-	0.0	-	1.6	0.0	1.3	0.0	-	0.0	-	1.2	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	-	0.0	1.4	
Trucks	0	18	0	0	0	-	18	0	27	0	0	0	-	27	0	0	0	0	0	-	0	0	0	0	0	0	-	0	45	
% Trucks	0.0	1.3	0.0	-	0.0	-	1.3	0.0	1.6	0.0	-	0.0	-	1.6	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	-	0.0	1.4	
Bicycles on Crosswalk	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	6	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	60.0	-	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	40.0	-	-



Turning Movement Peak Hour Data Plot (4:30 PM)



Fairfax, VA
 Fairfax Blvd & Central Rt In/Rt
 Out Driveway
 Thursday, April 27, 2023
 Location: 38.861896, -77.295274

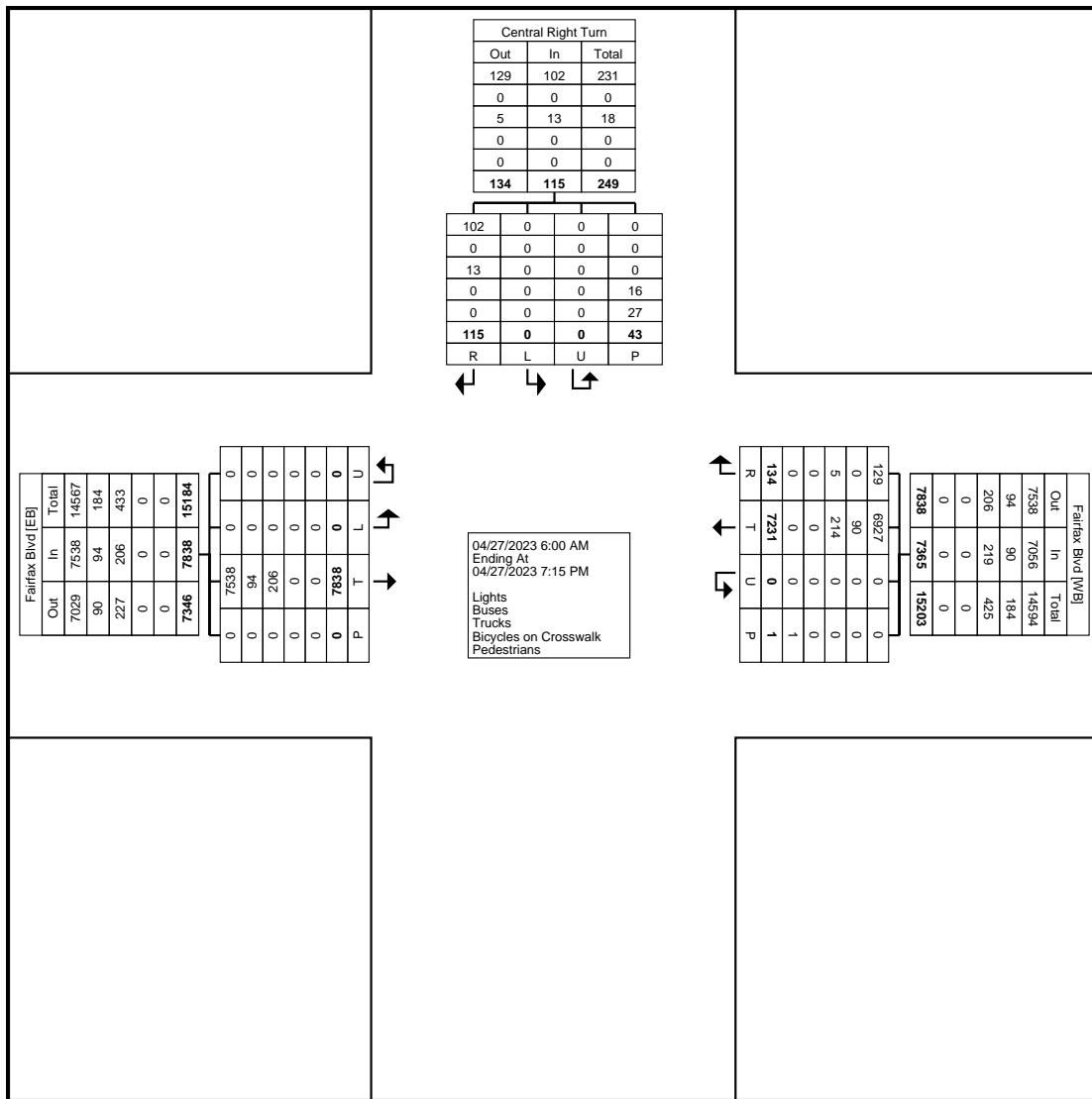
www.TSTData.com
 184 Baker Rd

Coatesville, Pennsylvania, United States 19320
 610-466-1469
 Serving Transportation Professionals Since 1995

Count Name: Fairfax Boulevard & Central Right Turn In/Right Turn Out Driveway
 Site Code:
 Start Date: 04/27/2023
 Page No: 1

Turning Movement Data

Start Time	Fairfax Blvd Eastbound					Fairfax Blvd Westbound					Central Right Turn In/Right Turn Out Driveway Southbound					
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	144	0	0	144	74	1	0	0	75	0	2	0	0	2	221
6:15 AM	0	208	0	0	208	90	3	0	0	93	0	2	0	2	2	303
6:30 AM	0	248	0	0	248	107	1	0	0	108	0	2	0	0	2	358
6:45 AM	0	272	0	0	272	133	2	0	0	135	0	2	0	0	2	409
Hourly Total	0	872	0	0	872	404	7	0	0	411	0	8	0	2	8	1291
7:00 AM	0	300	0	0	300	175	1	0	0	176	0	3	0	3	3	479
7:15 AM	0	387	0	0	387	188	2	0	0	190	0	4	0	0	4	581
7:30 AM	0	504	0	0	504	244	3	0	0	247	0	5	0	0	5	756
7:45 AM	0	525	0	0	525	257	5	0	0	262	0	8	0	1	8	795
Hourly Total	0	1716	0	0	1716	864	11	0	0	875	0	20	0	4	20	2611
8:00 AM	0	476	0	0	476	327	1	0	0	328	0	4	0	3	4	808
8:15 AM	0	337	0	0	337	254	2	0	0	256	0	7	0	0	7	600
8:30 AM	0	345	0	0	345	262	3	0	0	265	0	5	0	2	5	615
8:45 AM	0	336	0	0	336	271	2	0	0	273	0	0	0	1	0	609
Hourly Total	0	1494	0	0	1494	1114	8	0	0	1122	0	16	0	6	16	2632
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	289	0	0	289	421	9	0	0	430	0	6	0	1	6	725
4:15 PM	0	298	0	0	298	360	13	0	0	373	0	5	0	6	5	676
4:30 PM	0	325	0	0	325	434	9	0	1	443	0	6	0	2	6	774
4:45 PM	0	317	0	0	317	440	5	0	0	445	0	2	0	1	2	764
Hourly Total	0	1229	0	0	1229	1655	36	0	1	1691	0	19	0	10	19	2939
5:00 PM	0	355	0	0	355	432	6	0	0	438	0	3	0	0	3	796
5:15 PM	0	366	0	0	366	445	9	0	0	454	0	10	0	0	10	830
5:30 PM	0	350	0	0	350	446	14	0	0	460	0	5	0	0	5	815
5:45 PM	0	340	0	0	340	406	9	0	0	415	0	3	0	2	3	758
Hourly Total	0	1411	0	0	1411	1729	38	0	0	1767	0	21	0	2	21	3199
6:00 PM	0	270	0	0	270	425	6	0	0	431	0	5	0	8	5	706
6:15 PM	0	306	0	0	306	379	12	0	0	391	0	6	0	5	6	703
6:30 PM	0	260	0	0	260	368	9	0	0	377	0	9	0	4	9	646
6:45 PM	0	279	0	0	279	292	7	0	0	299	0	11	0	2	11	589
Hourly Total	0	1115	0	0	1115	1464	34	0	0	1498	0	31	0	19	31	2644
7:00 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Grand Total	0	7838	0	0	7838	7231	134	0	1	7365	0	115	0	43	115	15318
Approach %	0.0	100.0	0.0	-	-	98.2	1.8	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	51.2	0.0	-	51.2	47.2	0.9	0.0	-	48.1	0.0	0.8	0.0	-	0.8	-
Lights	0	7538	0	-	7538	6927	129	0	-	7056	0	102	0	-	102	14696
% Lights	-	96.2	-	-	96.2	95.8	96.3	-	-	95.8	-	88.7	-	-	88.7	95.9
Buses	0	94	0	-	94	90	0	0	-	90	0	0	0	-	0	184
% Buses	-	1.2	-	-	1.2	1.2	0.0	-	-	1.2	-	0.0	-	-	0.0	1.2
Trucks	0	206	0	-	206	214	5	0	-	219	0	13	0	-	13	438
% Trucks	-	2.6	-	-	2.6	3.0	3.7	-	-	3.0	-	11.3	-	-	11.3	2.9
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	16	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	37.2	-	-
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	27	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	62.8	-	-



Turning Movement Data Plot



Fairfax, VA
 Fairfax Blvd & Central Rt In/Rt
 Out Driveway
 Thursday, April 27, 2023
 Location: 38.861896, -
 77.295274

www.TSTData.com
 184 Baker Rd
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Count Name: Fairfax Boulevard
 & Central Right Turn In/Right
 Turn Out Driveway
 Site Code:
 Start Date: 04/27/2023
 Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

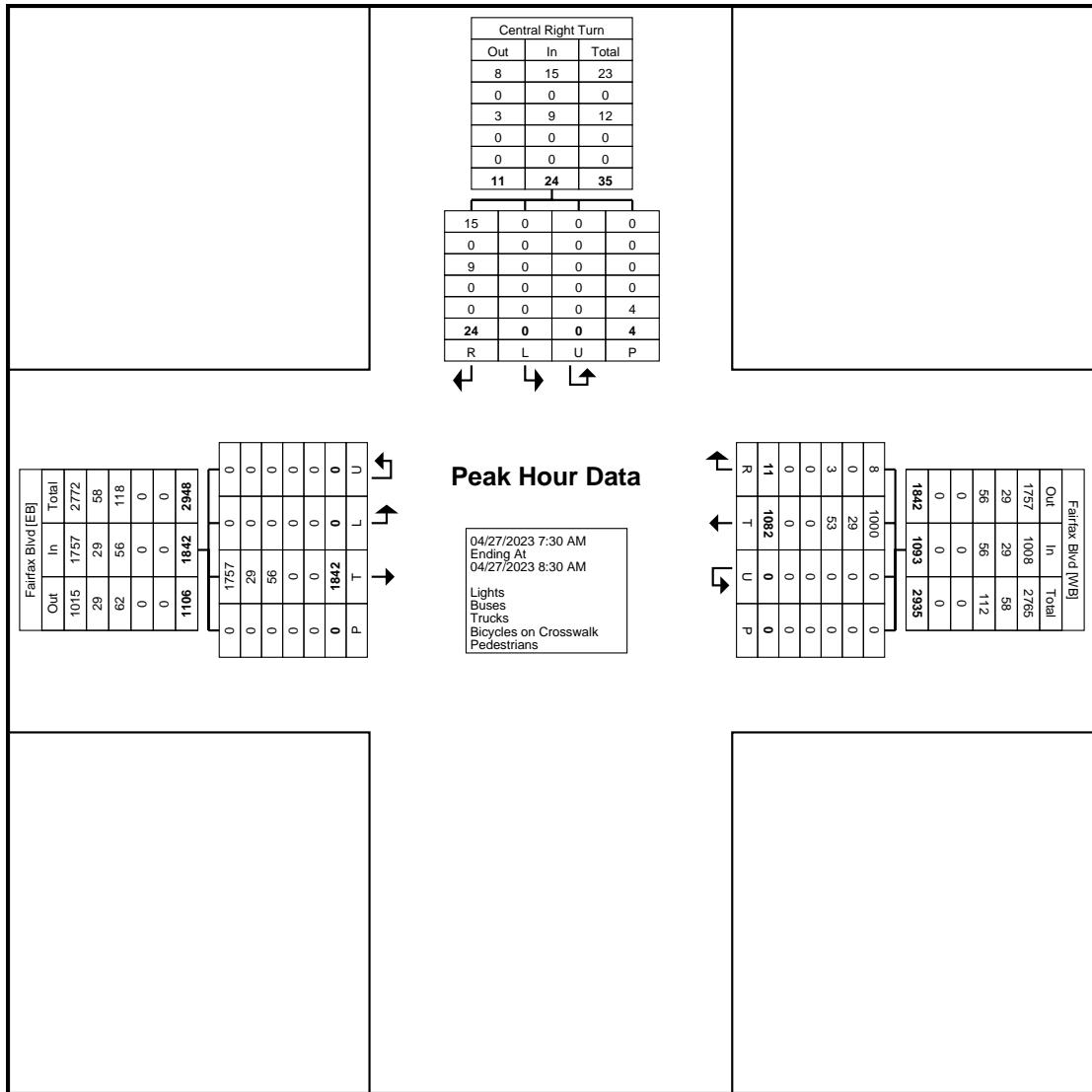
Start Time	Fairfax Blvd Eastbound					Fairfax Blvd Westbound					Central Right Turn In/Right Turn Out Driveway					
											Southbound					
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	0	504	0	0	504	244	3	0	0	247	0	5	0	0	5	756
7:45 AM	0	525	0	0	525	257	5	0	0	262	0	8	0	1	8	795
8:00 AM	0	476	0	0	476	327	1	0	0	328	0	4	0	3	4	808
8:15 AM	0	337	0	0	337	254	2	0	0	256	0	7	0	0	7	600
Total	0	1842	0	0	1842	1082	11	0	0	1093	0	24	0	4	24	2959
Approach %	0.0	100.0	0.0	-	-	99.0	1.0	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	62.3	0.0	-	62.3	36.6	0.4	0.0	-	36.9	0.0	0.8	0.0	-	0.8	-
PHF	0.000	0.877	0.000	-	0.877	0.827	0.550	0.000	-	0.833	0.000	0.750	0.000	-	0.750	0.916
Lights	0	1757	0	-	1757	1000	8	0	-	1008	0	15	0	-	15	2780
% Lights	-	95.4	-	-	95.4	92.4	72.7	-	-	92.2	-	62.5	-	-	62.5	94.0
Buses	0	29	0	-	29	29	0	0	-	29	0	0	0	-	0	58
% Buses	-	1.6	-	-	1.6	2.7	0.0	-	-	2.7	-	0.0	-	-	0.0	2.0
Trucks	0	56	0	-	56	53	3	0	-	56	0	9	0	-	9	121
% Trucks	-	3.0	-	-	3.0	4.9	27.3	-	-	5.1	-	37.5	-	-	37.5	4.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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 Start Date: 04/27/2023
 Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

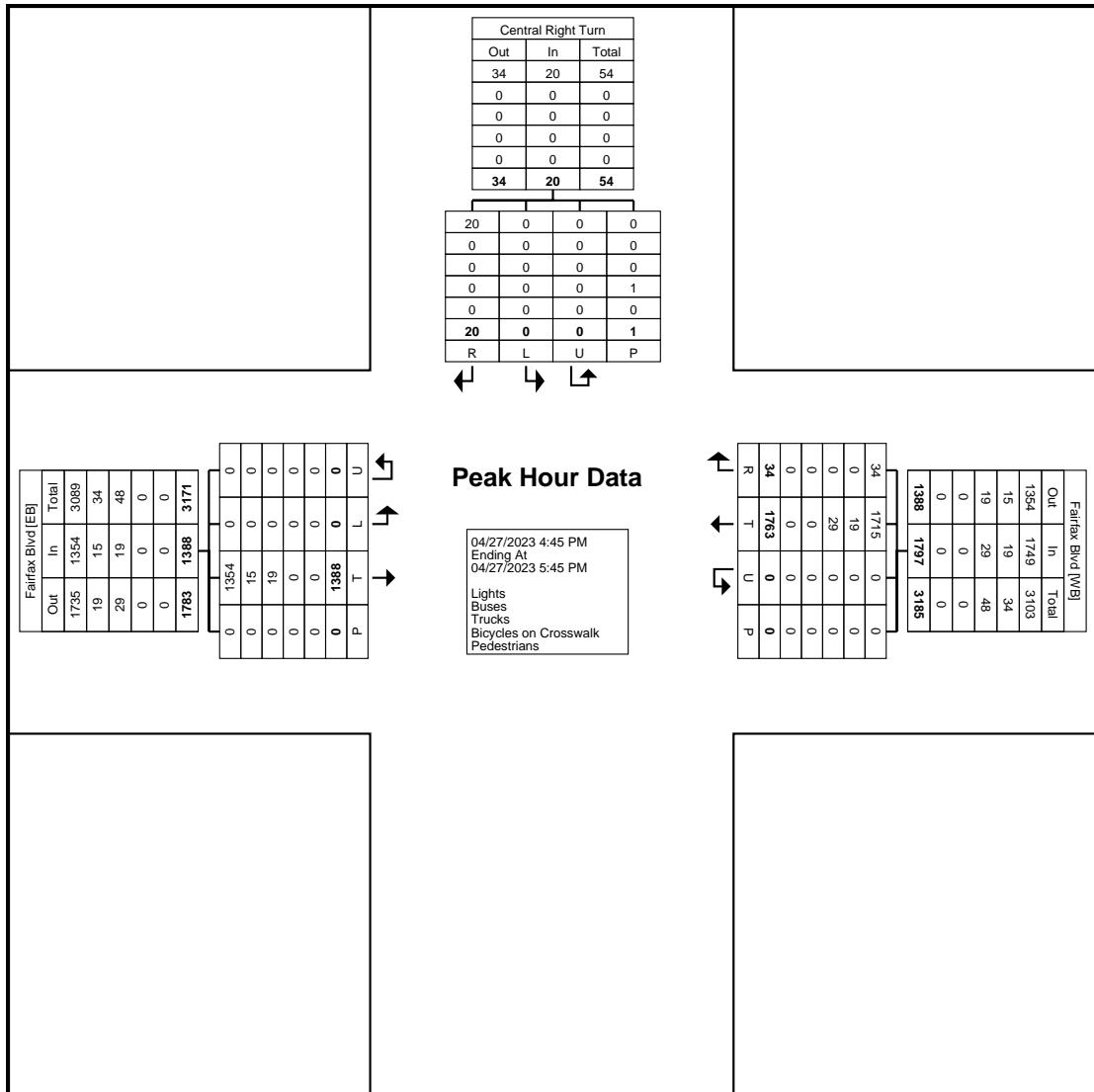
Start Time	Fairfax Blvd Eastbound					Fairfax Blvd Westbound					Central Right Turn In/Right Turn Out Driveway Southbound					Int. Total
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
4:45 PM	0	317	0	0	317	440	5	0	0	445	0	2	0	1	2	764
5:00 PM	0	355	0	0	355	432	6	0	0	438	0	3	0	0	3	796
5:15 PM	0	366	0	0	366	445	9	0	0	454	0	10	0	0	10	830
5:30 PM	0	350	0	0	350	446	14	0	0	460	0	5	0	0	5	815
Total	0	1388	0	0	1388	1763	34	0	0	1797	0	20	0	1	20	3205
Approach %	0.0	100.0	0.0	-	-	98.1	1.9	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	43.3	0.0	-	43.3	55.0	1.1	0.0	-	56.1	0.0	0.6	0.0	-	0.6	-
PHF	0.000	0.948	0.000	-	0.948	0.988	0.607	0.000	-	0.977	0.000	0.500	0.000	-	0.500	0.965
Lights	0	1354	0	-	1354	1715	34	0	-	1749	0	20	0	-	20	3123
% Lights	-	97.6	-	-	97.6	97.3	100.0	-	-	97.3	-	100.0	-	-	100.0	97.4
Buses	0	15	0	-	15	19	0	0	-	19	0	0	0	-	0	34
% Buses	-	1.1	-	-	1.1	1.1	0.0	-	-	1.1	-	0.0	-	-	0.0	1.1
Trucks	0	19	0	-	19	29	0	0	-	29	0	0	0	-	0	48
% Trucks	-	1.4	-	-	1.4	1.6	0.0	-	-	1.6	-	0.0	-	-	0.0	1.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-

Fairfax, VA
Fairfax Blvd & Central Rt In/Rt
Out Driveway
Thursday, April 27, 2023
Location: 38.861896, -
77.295274

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
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Count Name: Fairfax Boulevard
& Central Right Turn In/Right
Turn Out Driveway
Site Code:
Start Date: 04/27/2023
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)



Fairfax, VA
 Fairfax Blvd & Eastern Rt In/Rt
 Out Driveway
 Thursday, April 27, 2023
 Location: 38.862064, -
 77.294294

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Count Name: Fairfax Boulevard & Eastern Right Turn In/Right Turn Out Driveway
 Site Code:
 Start Date: 04/27/2023
 Page No: 1

Turning Movement Data

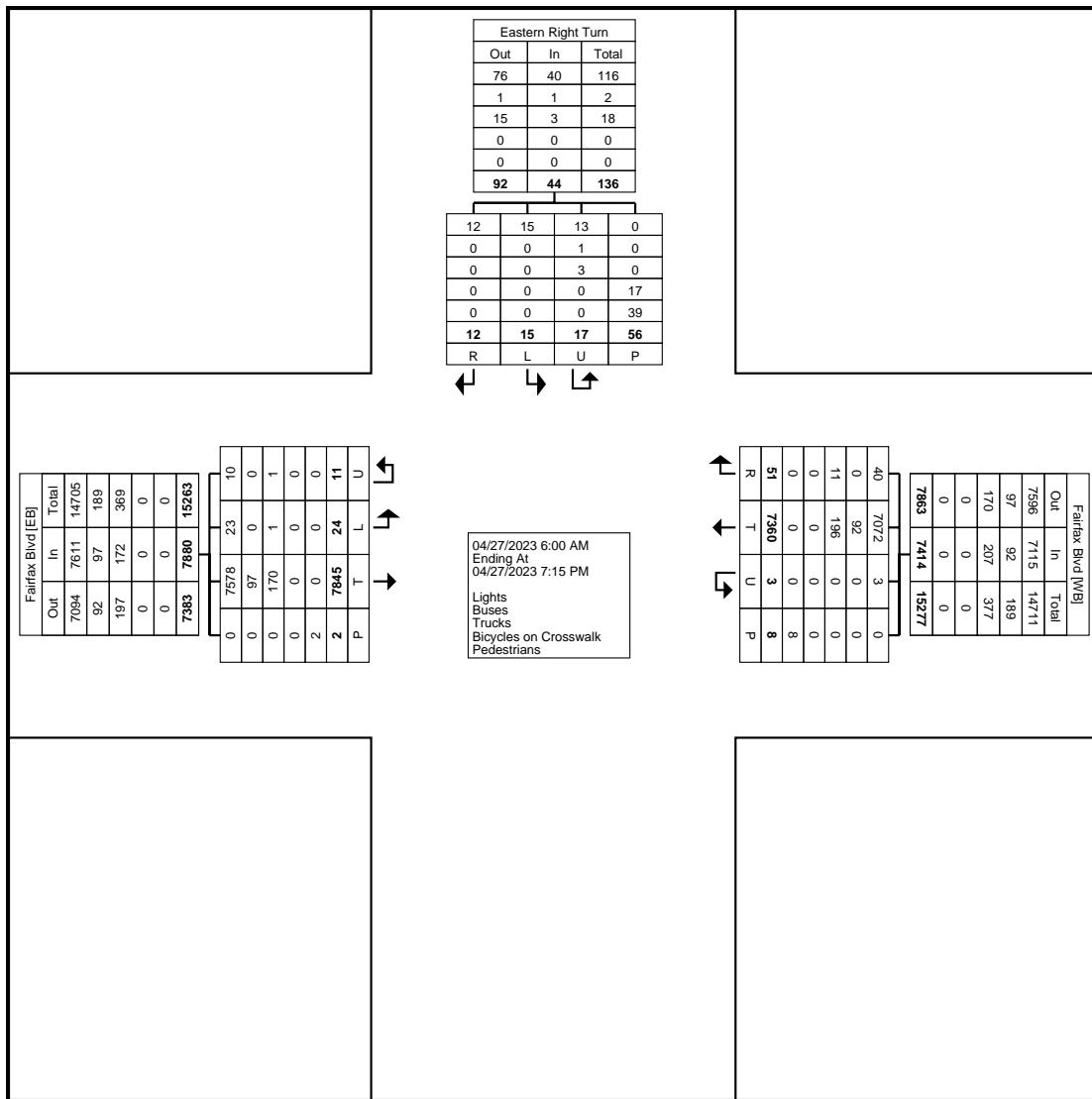
Start Time	Fairfax Blvd Eastbound					Fairfax Blvd Westbound					Eastern Right Turn In/Right Turn Out Driveway Southbound					Int. Total		
					App. Total					App. Total					App. Total			
	Left	Thru	U-Turn	Peds		Thru	Right	Right on Red	U-Turn	Peds		Left	Right	Right on Red	U-Turn	Peds		
6:00 AM	0	139	0	0	139	78	1	0	0	0	79	0	0	0	0	0	218	
6:15 AM	0	204	0	0	204	92	0	0	0	0	92	0	0	0	0	2	296	
6:30 AM	0	254	0	0	254	109	0	0	0	1	109	0	0	0	0	0	363	
6:45 AM	1	297	0	0	298	134	0	0	0	3	134	0	0	0	0	0	432	
Hourly Total	1	894	0	0	895	413	1	0	0	4	414	0	0	0	0	2	0	1309
7:00 AM	0	305	0	0	305	179	3	0	0	0	182	0	0	0	0	2	0	487
7:15 AM	0	411	0	0	411	184	5	0	0	0	189	0	0	0	0	1	0	600
7:30 AM	1	538	1	0	540	245	4	0	0	0	249	0	0	0	0	0	0	789
7:45 AM	2	537	1	0	540	263	3	0	0	0	266	0	0	0	0	1	0	806
Hourly Total	3	1791	2	0	1796	871	15	0	0	0	886	0	0	0	0	4	0	2682
8:00 AM	0	467	0	0	467	334	4	0	0	0	338	0	0	0	0	3	0	805
8:15 AM	0	323	0	0	323	256	3	0	0	0	259	0	0	1	0	1	1	583
8:30 AM	0	332	0	0	332	267	2	0	1	0	270	0	0	1	0	1	1	603
8:45 AM	0	304	0	0	304	274	3	0	0	0	277	0	0	1	3	1	4	585
Hourly Total	0	1426	0	0	1426	1131	12	0	1	0	1144	0	0	3	3	6	6	2576
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	5	278	0	0	283	430	2	0	0	0	432	0	1	0	3	1	4	719
4:15 PM	1	280	0	0	281	373	4	0	0	0	377	3	0	0	0	6	3	661
4:30 PM	2	343	2	0	347	443	4	0	0	0	447	1	1	0	2	2	4	798
4:45 PM	4	307	2	0	313	439	1	0	0	0	440	1	1	0	0	3	2	755
Hourly Total	12	1208	4	0	1224	1685	11	0	0	0	1696	5	3	0	5	12	13	2933
5:00 PM	2	332	1	0	335	462	1	0	0	0	463	2	0	0	1	1	3	801
5:15 PM	1	368	0	0	369	440	1	0	0	0	441	1	0	0	1	5	2	812
5:30 PM	5	353	2	0	360	461	2	0	0	3	463	4	0	0	1	6	5	828
5:45 PM	0	328	2	0	330	412	1	0	2	0	415	0	0	0	0	5	0	745
Hourly Total	8	1381	5	0	1394	1775	5	0	2	3	1782	7	0	0	3	17	10	3186
6:00 PM	0	285	0	0	285	429	2	0	0	1	431	0	0	0	1	7	1	717
6:15 PM	0	302	0	1	302	393	2	0	0	0	395	0	1	0	2	2	3	700
6:30 PM	0	271	0	1	271	370	3	0	0	0	373	0	0	3	1	4	4	648
6:45 PM	0	287	0	0	287	292	0	0	0	0	292	3	0	2	2	2	7	586
Hourly Total	0	1145	0	2	1145	1484	7	0	0	1	1491	3	1	5	6	15	15	2651
7:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Grand Total	24	7845	11	2	7880	7360	51	0	3	8	7414	15	4	8	17	56	44	15338
Approach %	0.3	99.6	0.1	-	-	99.3	0.7	0.0	0.0	-	-	34.1	9.1	18.2	38.6	-	-	-
Total %	0.2	51.1	0.1	-	51.4	48.0	0.3	0.0	0.0	-	48.3	0.1	0.0	0.1	0.1	-	0.3	-
Lights	23	7578	10	-	7611	7072	40	0	3	-	7115	15	4	8	13	-	40	14766
% Lights	95.8	96.6	90.9	-	96.6	96.1	78.4	-	100.0	-	96.0	100.0	100.0	76.5	-	90.9	96.3	
Buses	0	97	0	-	97	92	0	0	0	-	92	0	0	0	1	-	1	190
% Buses	0.0	1.2	0.0	-	1.2	1.3	0.0	-	0.0	-	1.2	0.0	0.0	0.0	5.9	-	2.3	1.2
Trucks	1	170	1	-	172	196	11	0	0	-	207	0	0	0	3	-	3	382
% Trucks	4.2	2.2	9.1	-	2.2	2.7	21.6	-	0.0	-	2.8	0.0	0.0	0.0	17.6	-	6.8	2.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	17	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	30.4	-	-
Pedestrians	-	-	-	2	-	-	-	-	-	8	-	-	-	-	-	39	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	69.6	-	-

Fairfax, VA
Fairfax Blvd & Eastern Rt In/Rt
Out Driveway
Thursday, April 27, 2023
Location: 38.862064, -
77.294294

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Count Name: Fairfax Boulevard
& Eastern Right Turn In/Right
Turn Out Driveway
Site Code:
Start Date: 04/27/2023
Page No: 2



Turning Movement Data Plot



Fairfax, VA
 Fairfax Blvd & Eastern Rt In/Rt
 Out Driveway
 Thursday, April 27, 2023
 Location: 38.862064, -77.294294

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Count Name: Fairfax Boulevard & Eastern Right Turn In/Right Turn Out Driveway
 Site Code:
 Start Date: 04/27/2023
 Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

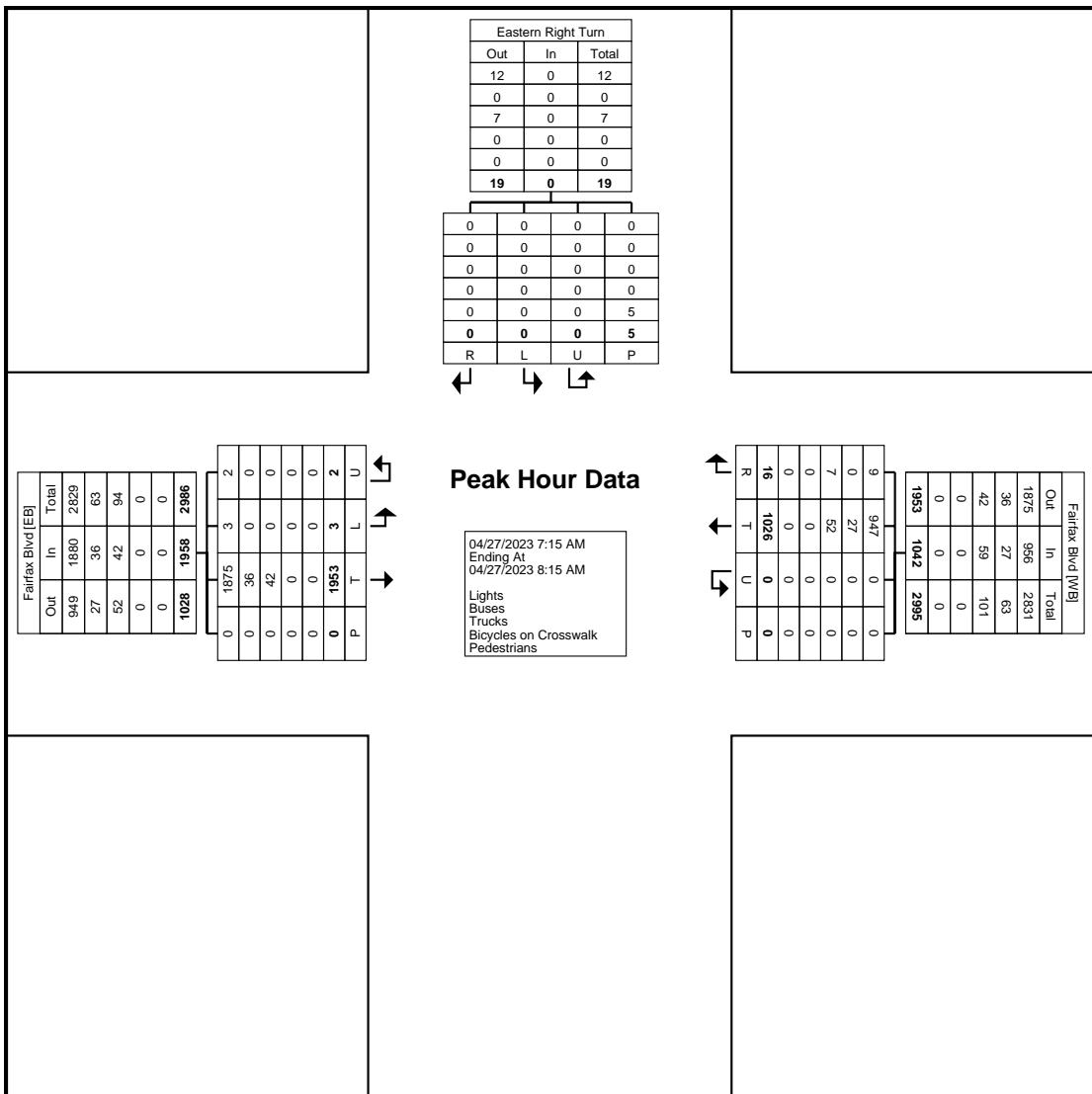
Start Time	Fairfax Blvd Eastbound					Fairfax Blvd Westbound					Eastern Right Turn In/Right Turn Out Driveway Southbound					Int. Total		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Right	Right on Red	U-Turn	Peds	App. Total	
7:15 AM	0	411	0	0	411	184	5	0	0	0	189	0	0	0	0	1	0	600
7:30 AM	1	538	1	0	540	245	4	0	0	0	249	0	0	0	0	0	0	789
7:45 AM	2	537	1	0	540	263	3	0	0	0	266	0	0	0	0	1	0	806
8:00 AM	0	467	0	0	467	334	4	0	0	0	338	0	0	0	0	3	0	805
Total	3	1953	2	0	1958	1026	16	0	0	0	1042	0	0	0	0	5	0	3000
Approach %	0.2	99.7	0.1	-	-	98.5	1.5	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	0.1	65.1	0.1	-	65.3	34.2	0.5	0.0	0.0	-	34.7	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.375	0.908	0.500	-	0.906	0.768	0.800	0.000	0.000	-	0.771	0.000	0.000	0.000	0.000	-	0.000	0.931
Lights	3	1875	2	-	1880	947	9	0	0	-	956	0	0	0	0	-	0	2836
% Lights	100.0	96.0	100.0	-	96.0	92.3	56.3	-	-	-	91.7	-	-	-	-	-	-	94.5
Buses	0	36	0	-	36	27	0	0	0	-	27	0	0	0	0	-	0	63
% Buses	0.0	1.8	0.0	-	1.8	2.6	0.0	-	-	-	2.6	-	-	-	-	-	-	2.1
Trucks	0	42	0	-	42	52	7	0	0	-	59	0	0	0	0	-	0	101
% Trucks	0.0	2.2	0.0	-	2.1	5.1	43.8	-	-	-	5.7	-	-	-	-	-	-	3.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Fairfax, VA
Fairfax Blvd & Eastern Rt In/Rt
Out Driveway
Thursday, April 27, 2023
Location: 38.862064, -
77.294294

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Count Name: Fairfax Boulevard
& Eastern Right Turn In/Right
Turn Out Driveway
Site Code:
Start Date: 04/27/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)



Fairfax, VA
 Fairfax Blvd & Eastern Rt In/Rt
 Out Driveway
 Thursday, April 27, 2023
 Location: 38.862064, -77.294294

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Count Name: Fairfax Boulevard & Eastern Right Turn In/Right Turn Out Driveway
 Site Code:
 Start Date: 04/27/2023
 Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

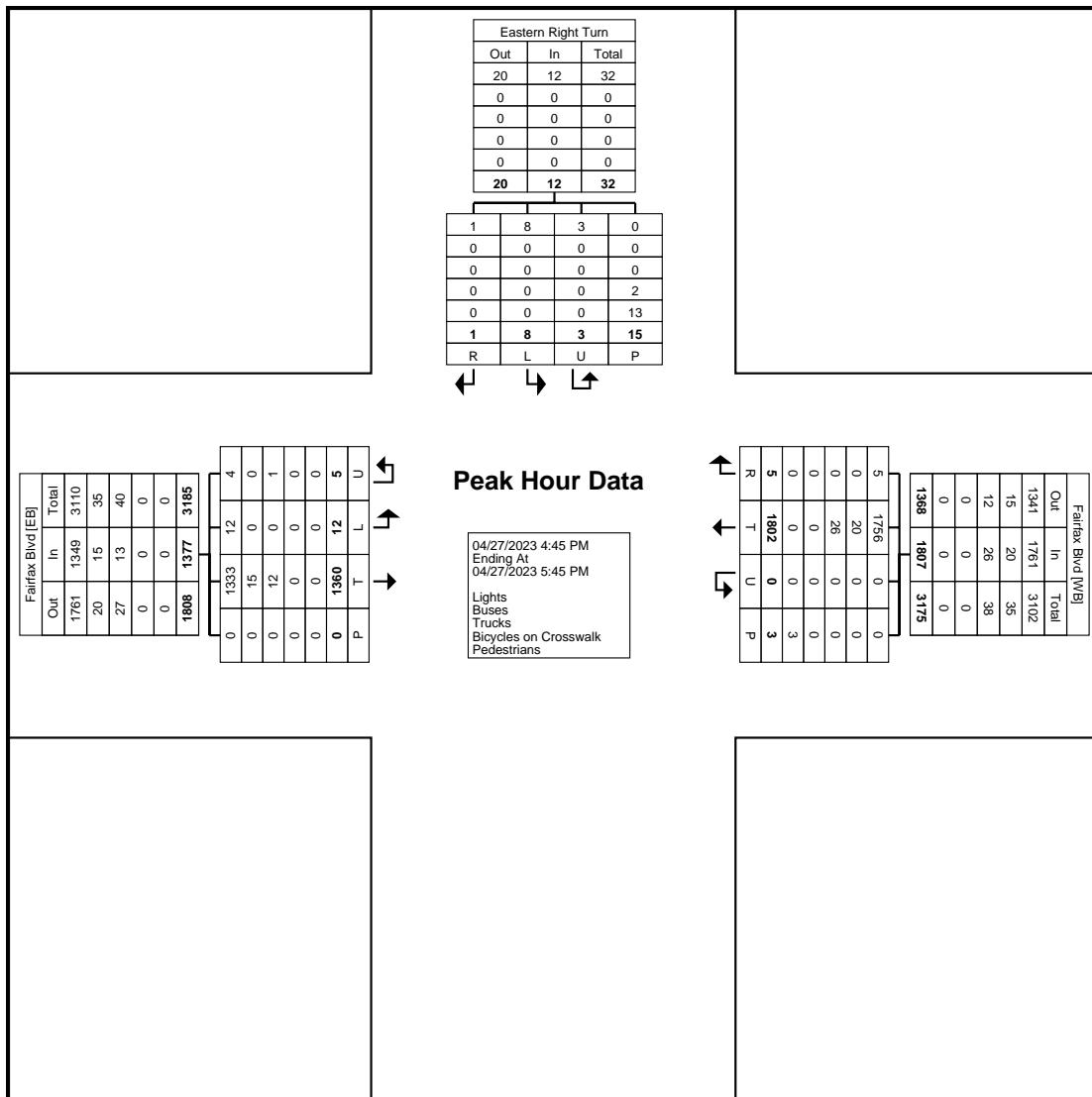
Start Time	Fairfax Blvd Eastbound					Fairfax Blvd Westbound					Eastern Right Turn In/Right Turn Out Driveway Southbound					Int. Total		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Right	Right on Red	U-Turn	Peds		
4:45 PM	4	307	2	0	313	439	1	0	0	0	440	1	1	0	0	3	2	755
5:00 PM	2	332	1	0	335	462	1	0	0	0	463	2	0	0	1	1	3	801
5:15 PM	1	368	0	0	369	440	1	0	0	0	441	1	0	0	1	5	2	812
5:30 PM	5	353	2	0	360	461	2	0	0	3	463	4	0	0	1	6	5	828
Total	12	1360	5	0	1377	1802	5	0	0	3	1807	8	1	0	3	15	12	3196
Approach %	0.9	98.8	0.4	-	-	99.7	0.3	0.0	0.0	-	-	66.7	8.3	0.0	25.0	-	-	-
Total %	0.4	42.6	0.2	-	43.1	56.4	0.2	0.0	0.0	-	56.5	0.3	0.0	0.0	0.1	-	0.4	-
PHF	0.600	0.924	0.625	-	0.933	0.975	0.625	0.000	0.000	-	0.976	0.500	0.250	0.000	0.750	-	0.600	0.965
Lights	12	1333	4	-	1349	1756	5	0	0	-	1761	8	1	0	3	-	12	3122
% Lights	100.0	98.0	80.0	-	98.0	97.4	100.0	-	-	-	97.5	100.0	100.0	-	100.0	-	100.0	97.7
Buses	0	15	0	-	15	20	0	0	0	-	20	0	0	0	0	-	0	35
% Buses	0.0	1.1	0.0	-	1.1	1.1	0.0	-	-	-	1.1	0.0	0.0	-	0.0	-	0.0	1.1
Trucks	0	12	1	-	13	26	0	0	0	-	26	0	0	0	0	-	0	39
% Trucks	0.0	0.9	20.0	-	0.9	1.4	0.0	-	-	-	1.4	0.0	0.0	-	0.0	-	0.0	1.2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	13.3	-	-
Pedestrians	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	86.7	-	-

Fairfax, VA
Fairfax Blvd & Eastern Rt In/Rt
Out Driveway
Thursday, April 27, 2023
Location: 38.862064, -
77.294294

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Count Name: Fairfax Boulevard
& Eastern Right Turn In/Right
Turn Out Driveway
Site Code:
Start Date: 04/27/2023
Page No: 6

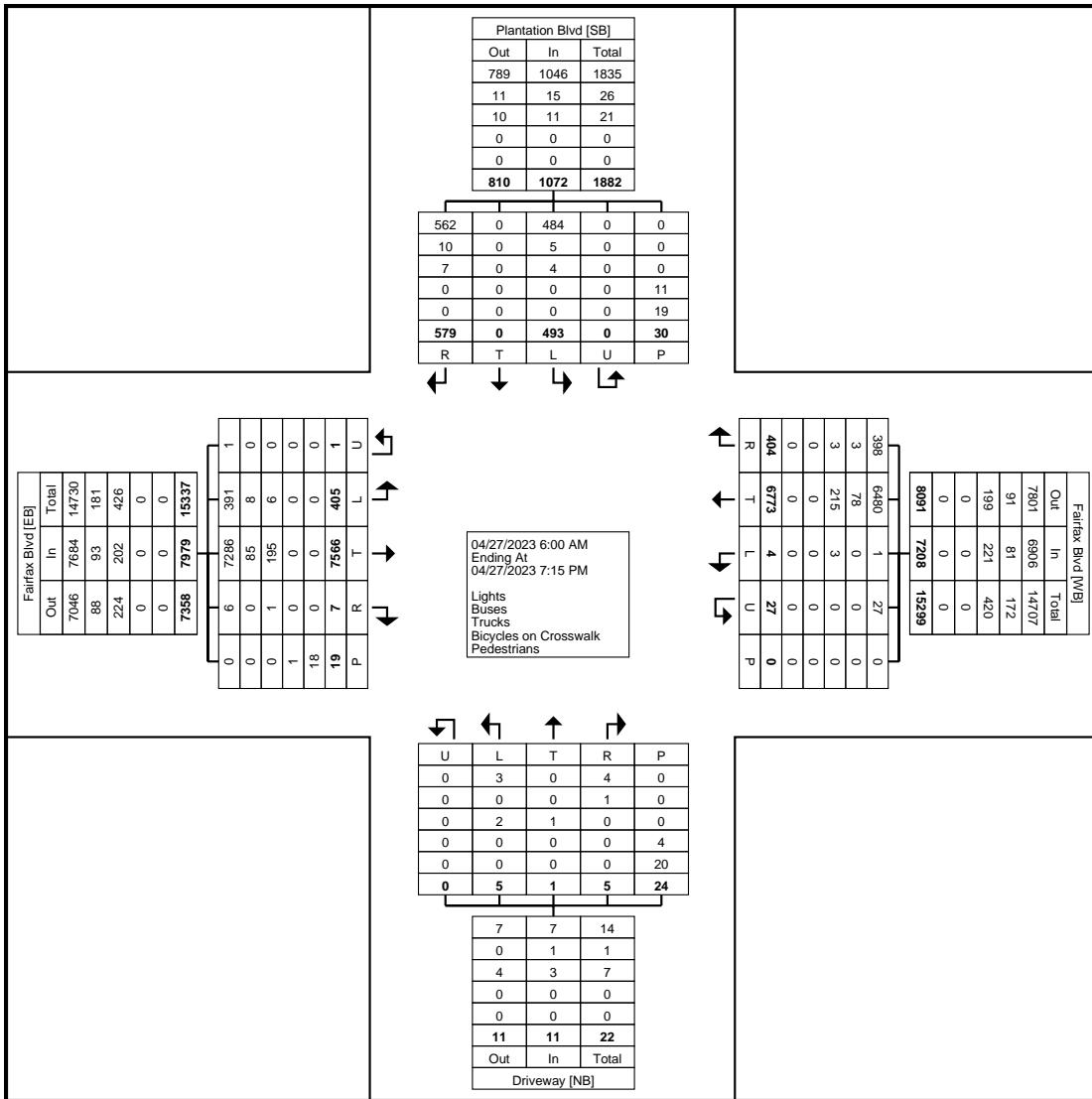


Turning Movement Peak Hour Data Plot (4:45 PM)

Fairfax, VA
Fairfax Blvd & Plantation Blvd
Thursday, April 27, 2023
Location: 38.862151, -77.293562

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Count Name: Fairfax Boulevard & Plantation Boulevard
Site Code:
Start Date: 04/27/2023
Page No: 2



Turning Movement Data Plot



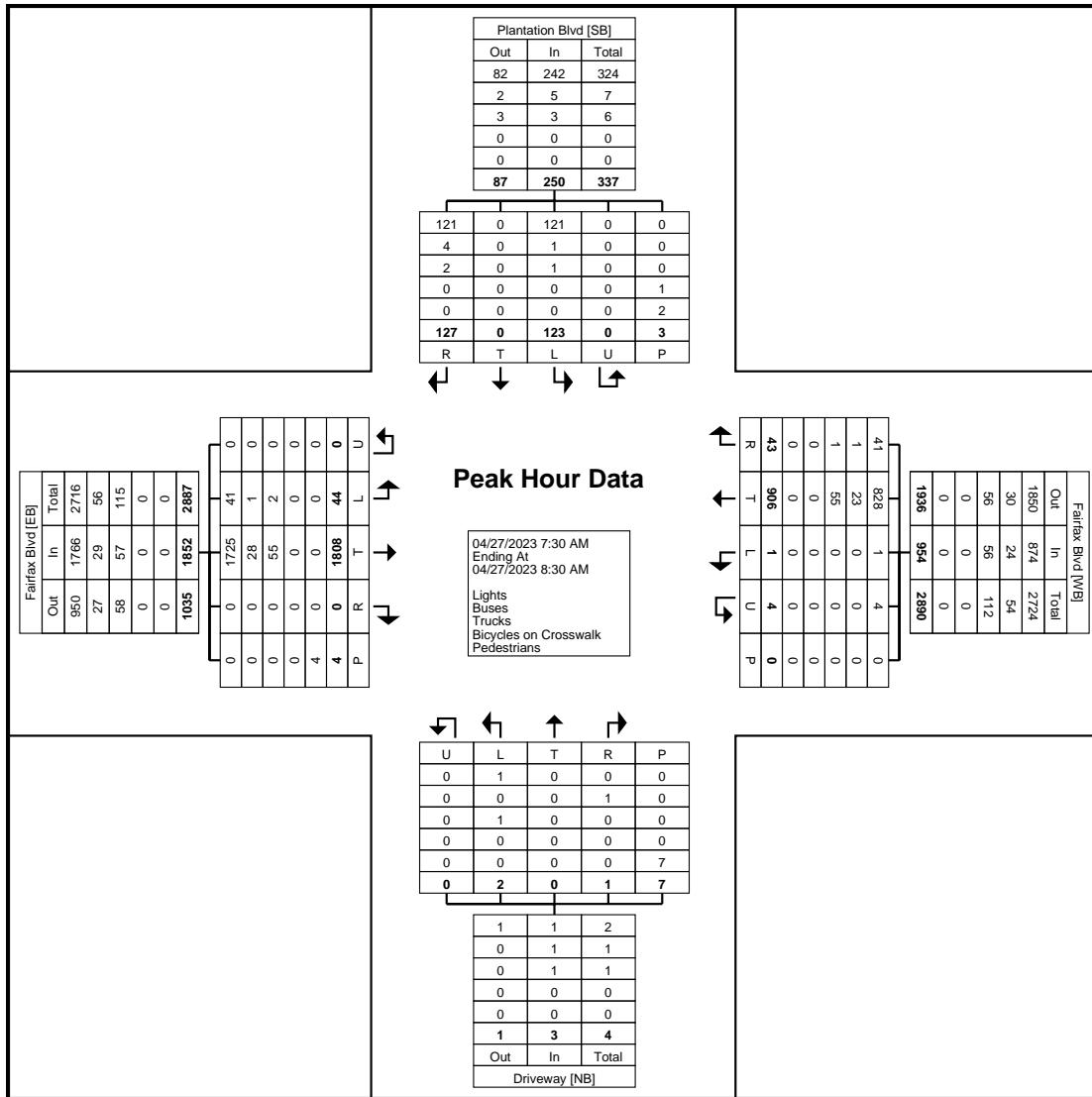
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Fairfax, VA
Fairfax Blvd & Plantation Blvd
Thursday, April 27, 2023
Location: 38.862151, -
77.293562

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Count Name: Fairfax Boulevard
& Plantation Boulevard
Site Code:
Start Date: 04/27/2023
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)



Turning Movement Peak Hour Data Plot (7:30 AM)



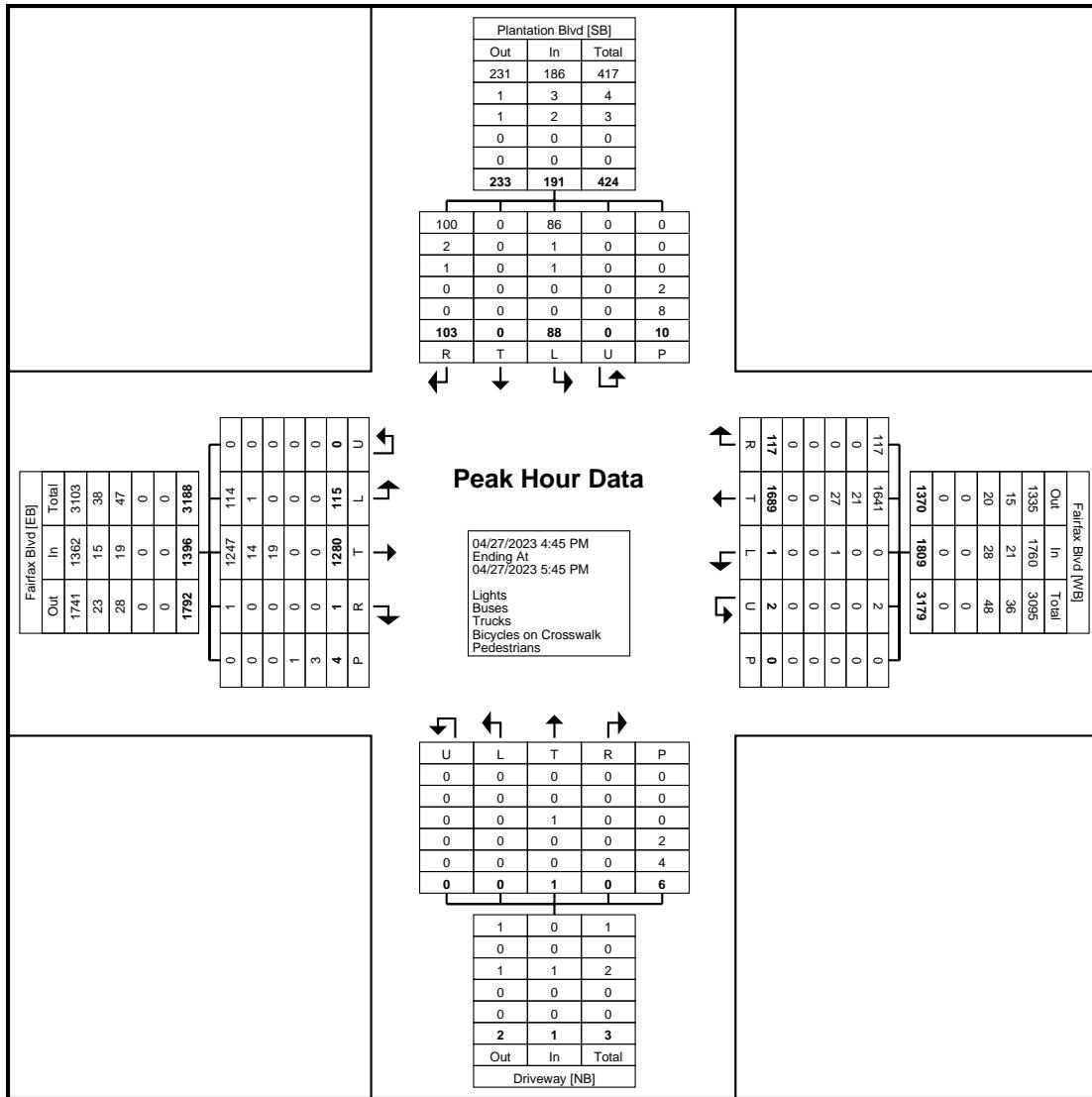
www.TSTDData.com
184 Baker Rd

Fairfax, VA
Fairfax Blvd & Plantation Blvd
Thursday, April 27, 2023
Location: 38.862151, -
77.293562

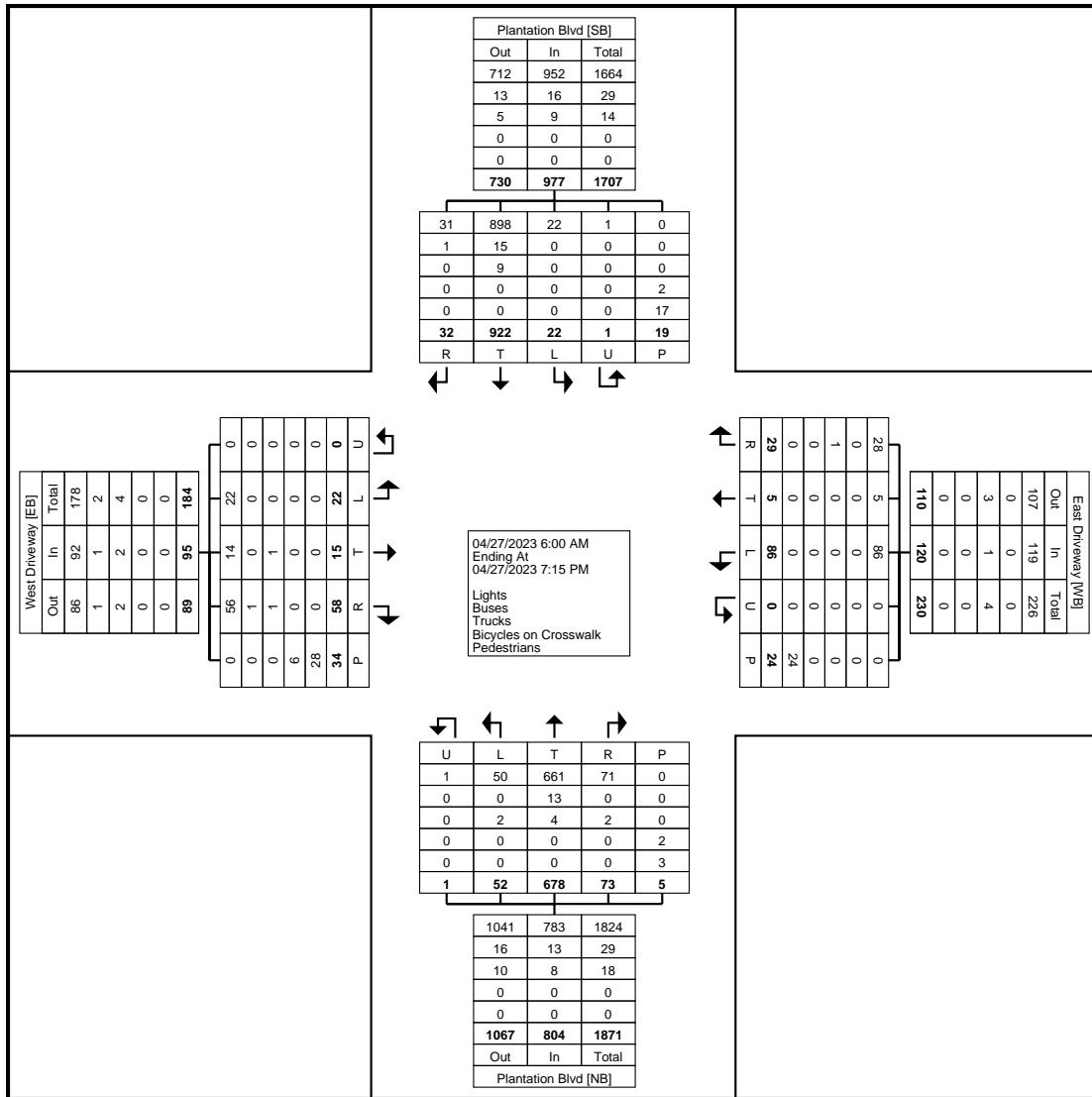
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Count Name: Fairfax Boulevard
& Plantation Boulevard
Site Code:
Start Date: 04/27/2023
Page No: 5

Turning Movement Peak Hour Data (4:45 PM)



Turning Movement Peak Hour Data Plot (4:45 PM)



Turning Movement Data Plot



Fairfax, VA
 Plantation Parkway & Northern
 Driveway
 Thursday, April 27, 2023
 Location: 38.862873, -
 77.293909

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Count Name: Plantation
 Parkway & Northern Driveway
 Site Code:
 Start Date: 04/27/2023
 Page No: 3

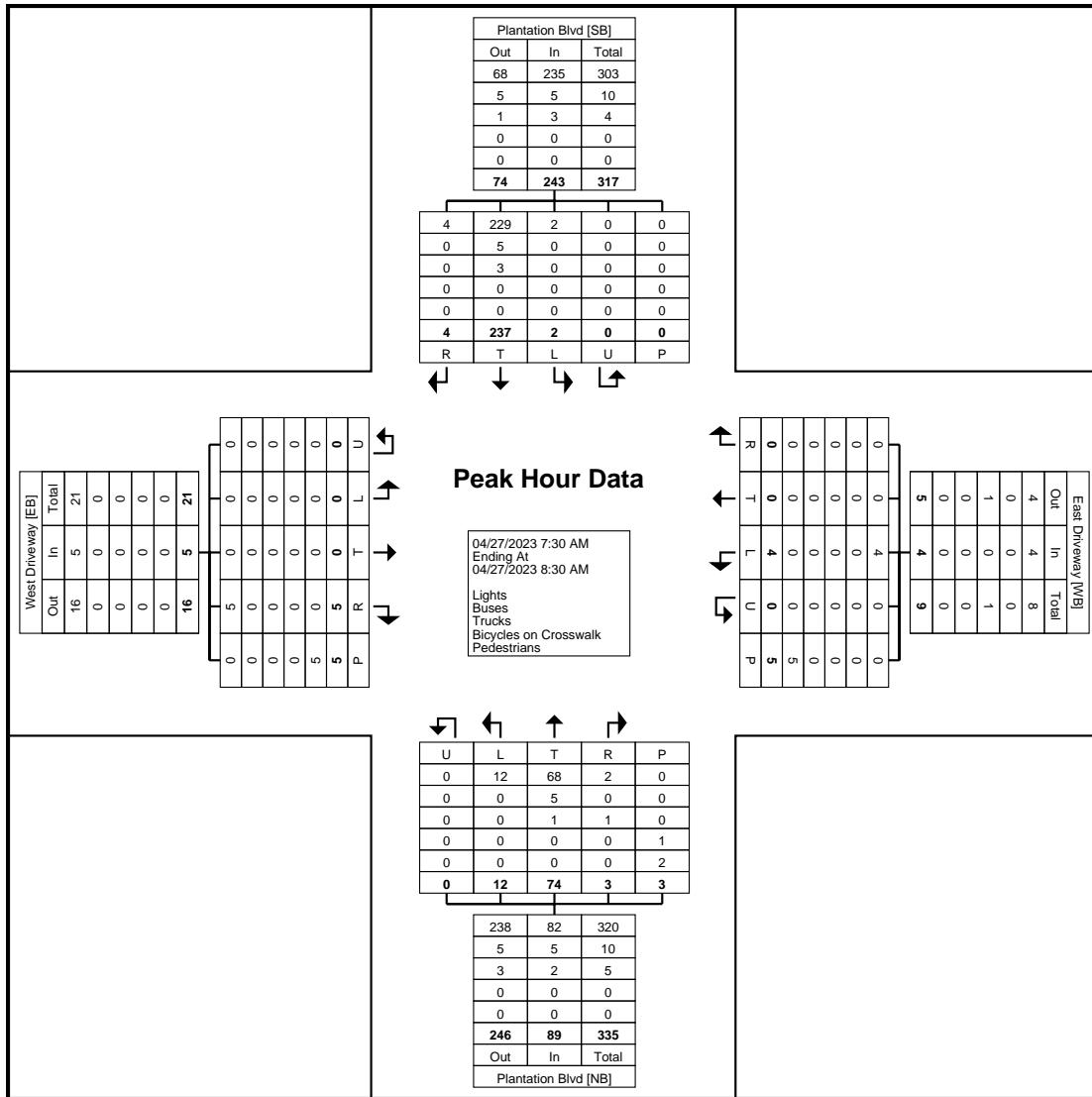
Turning Movement Peak Hour Data (7:30 AM)

Start Time	West Driveway						East Driveway						Plantation Blvd						Plantation Blvd						Int. Total
	Eastbound						Westbound						Northbound						Southbound						
Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total	
7:30 AM	0	0	1	0	2	1	1	0	0	0	4	1	0	15	0	0	0	15	0	59	1	0	0	60	77
7:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	4	15	1	0	0	20	1	63	1	0	0	65	86
8:00 AM	0	0	2	0	3	2	0	0	0	0	1	0	7	21	1	0	1	29	0	62	1	0	0	63	94
8:15 AM	0	0	1	0	0	1	3	0	0	0	0	3	1	23	1	0	2	25	1	53	1	0	0	55	84
Total	0	0	5	0	5	5	4	0	0	0	5	4	12	74	3	0	3	89	2	237	4	0	0	243	341
Approach %	0.0	0.0	100.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	13.5	83.1	3.4	0.0	-	-	0.8	97.5	1.6	0.0	-	-	-
Total %	0.0	0.0	1.5	0.0	-	1.5	1.2	0.0	0.0	0.0	-	1.2	3.5	21.7	0.9	0.0	-	26.1	0.6	69.5	1.2	0.0	-	71.3	-
PHF	0.000	0.000	0.625	0.000	-	0.625	0.333	0.000	0.000	0.000	-	0.333	0.429	0.804	0.750	0.000	-	0.767	0.500	0.940	1.000	0.000	-	0.935	0.907
Lights	0	0	5	0	-	5	4	0	0	0	-	4	12	68	2	0	-	82	2	229	4	0	-	235	326
% Lights	-	-	100.0	-	-	100.0	100.0	-	-	-	-	100.0	100.0	91.9	66.7	-	-	92.1	100.0	96.6	100.0	-	-	96.7	95.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	5	0	0	-	5	0	5	0	0	-	5	10
% Buses	-	-	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	6.8	0.0	-	-	5.6	0.0	2.1	0.0	-	-	2.1	2.9
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	1	0	-	2	0	3	0	0	-	3	5
% Trucks	-	-	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	1.4	33.3	-	-	2.2	0.0	1.3	0.0	-	-	1.2	1.5
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	33.3	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	66.7	-	-	-	-	-	-	-

Fairfax, VA
Plantation Parkway & Northern
Driveway
Thursday, April 27, 2023
Location: 38.862873, -
77.293909

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Count Name: Plantation
Parkway & Northern Driveway
Site Code:
Start Date: 04/27/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:30 AM)



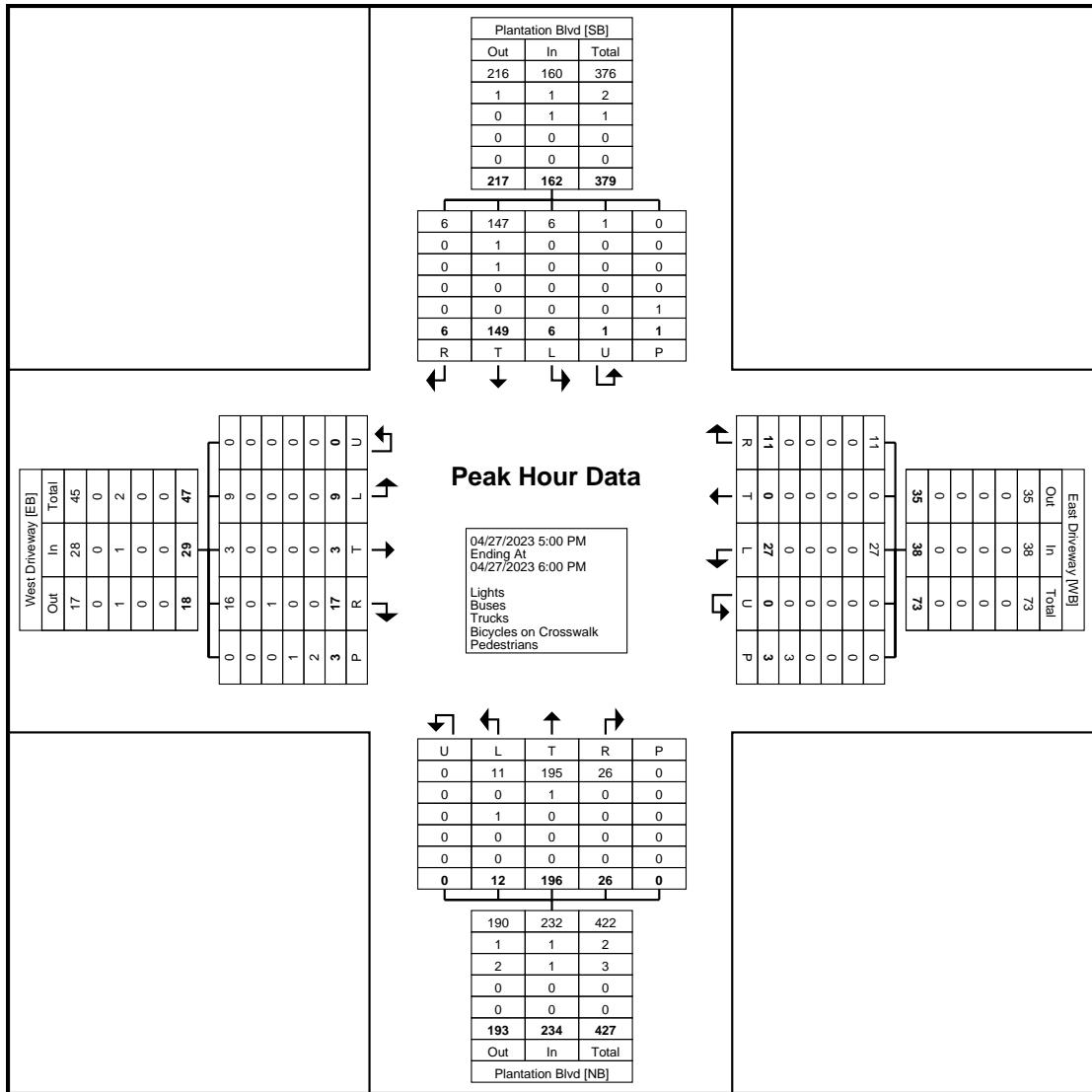
Fairfax, VA
Plantation Parkway & Northern
Driveway
Thursday, April 27, 2023
Location: 38.862873, -
77.293909

www.TSTData.com
184 Baker Rd
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Plantation
Parkway & Northern Driveway
Site Code:
Start Date: 04/27/2023
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	West Driveway						East Driveway						Plantation Blvd						Plantation Blvd						Int. Total				
	Eastbound					App. Total	Westbound					App. Total	Northbound					App. Total	Southbound					App. Total					
Left	Thru	Right	U-Turn	Peds		Left	Thru	Right	U-Turn	Peds		Left	Thru	Right	U-Turn	Peds		Left	Thru	Right	U-Turn	Peds		Left	Thru	Right	U-Turn	Peds	
5:00 PM	3	0	7	0	1	10	7	0	3	0	0	10	2	47	7	0	0	56	3	31	1	1	0	36	112				
5:15 PM	0	1	2	0	0	3	9	0	2	0	2	11	4	39	8	0	0	51	2	40	2	0	0	44	109				
5:30 PM	3	1	4	0	1	8	6	0	1	0	1	7	3	60	6	0	0	69	1	33	1	0	0	35	119				
5:45 PM	3	1	4	0	1	8	5	0	5	0	0	10	3	50	5	0	0	58	0	45	2	0	1	47	123				
Total	9	3	17	0	3	29	27	0	11	0	3	38	12	196	26	0	0	234	6	149	6	1	1	162	463				
Approach %	31.0	10.3	58.6	0.0	-	-	71.1	0.0	28.9	0.0	-	-	5.1	83.8	11.1	0.0	-	-	3.7	92.0	3.7	0.6	-	-	-				
Total %	1.9	0.6	3.7	0.0	-	6.3	5.8	0.0	2.4	0.0	-	8.2	2.6	42.3	5.6	0.0	-	50.5	1.3	32.2	1.3	0.2	-	35.0	-				
PHF	0.750	0.750	0.607	0.000	-	0.725	0.750	0.000	0.550	0.000	-	0.864	0.750	0.817	0.813	0.000	-	0.848	0.500	0.828	0.750	0.250	-	0.862	0.941				
Lights	9	3	16	0	-	28	27	0	11	0	-	38	11	195	26	0	-	232	6	147	6	1	-	160	458				
% Lights	100.0	100.0	94.1	-	-	96.6	100.0	-	100.0	-	-	100.0	91.7	99.5	100.0	-	-	99.1	100.0	98.7	100.0	100.0	-	98.8	98.9				
Buses	0	0	0	0	-	0	0	0	0	-	0	0	0	1	0	0	-	1	0	1	0	0	-	1	2				
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.5	0.0	-	-	0.4	0.0	0.7	0.0	0.0	-	0.6	0.4				
Trucks	0	0	1	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	0	1	0	0	-	1	3				
% Trucks	0.0	0.0	5.9	-	-	3.4	0.0	-	0.0	-	-	0.0	8.3	0.0	0.0	-	-	0.4	0.0	0.7	0.0	0.0	-	0.6	0.6				
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-				
% Bicycles on Crosswalk	-	-	-	-	-	33.3	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0	-	-				
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	1	-	-				
% Pedestrians	-	-	-	-	-	66.7	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-			



Turning Movement Peak Hour Data Plot (5:00 PM)

City of Fairfax Signal Coordination Timing - East Fairfax Blvd

Intersection # **53**
Name: **Fairfax Blvd. & Blvd Marketplace**
Group: East FFX Primary: Fairfax Blvd.

Type: Fully Actuated
Ring: Standard
Overlaps: None

Peds: SB(4),EB(2),WB(6)

Coordination Timing							
	AM	MD	PM	Offpeak	Night	WE	
MaxTime Pattern	12	22	32	100	100	42	
Splits\Cycle	190	150	220	Free	Free	150	
1	25	28	30		30		
2	119	73	138		75		
3	0	0	0		0		
4	46	49	52		45		
5	28	31	33		30		
6	116	70	135		75		
7	0	0	0		0		
8	46	49	52		45		
Offset (BOG)	156	37	161		126		
Coord Phases	2&6	2&6	2&6		2&6		
Rev. Phases							
Alt Seq							

Phase Timing

Phase	Direction	Min Green	Gap	Walk	FDW	Max 1	Max 2	Amber	All Red	Notes
1	WBLT	5.0	3.0			30	15	3.5	2.1	
2	EB	5.0	4.0	7	14	55	70	4.1	1.0	
3	n/a									
4	SB	5.0	3.0	7	21	25	35	3.5	3.3	
5	EBLT	5.0	3.0			30	15	3.5	2.4	
6	WB	5.0	4.0	7	14	55	70	4.1	1.0	
7	n/a									
8	NB	5.0	3.0			25	35	3.5	3.3	

AM: 7-10 M-F

MD: 10-14:45 M-F

PM: 14:45-19 M-F

WE: 10-20 Sat, 12-20 Sun

Free all other times.

Holidays run MD plan 8 AM to 8 PM, Free before 8 AM and after 8 PM

Intersection # **54**
Group: East FFX

Name: **Fairfax Blvd. & Fair Woods (ex-Plantation)/ FS33**
Primary: Fairfax Blvd.

Type: Semi-Actuated
Ring: Standard
Overlaps: None

Peds: SB(8),WB(2)

Coordination Timing

	AM	MD	PM	Offpeak	Night	WE		
MaxTime Pattern	12	22	32	100	100	42		
Splits/Cycle	190	150	220	Free	Free	150		
1	25	35	30			26		
2	125	77	152			75		
3	0	0	0			0		
4	40	38	38			49		
5	21	20	25			26		
6	129	92	157			75		
7	0	0	0			0		
8	40	38	38			49		
Offset (BOG)	160	47	111			108		
Coord Phases	2&6	2&6	2&6			2&6		
Rev. Phases								
Alt Seq								

Phase Timing

Phase	Direction	Min Green	Gap	Walk	FDW	Max 1	Max 2	Amber	All Red	Notes
1	EBLT	5.0	3.0			30	15	3.5	3.0	
2	WB	5.0	4.0	8	33	55	70	4.1	1.5	Max
3	n/a									
4	NB FS	10.0	3.0			35	35	3.5	3.6	
5	WBLT	5.0	3.0			30	15	3.5	2.0	
6	EB	5.0	4.0			55	70	4.1	1.5	Max
7	n/a									
8	SB	5.0	3.0	7	23	35	35	3.5	3.6	

AM: 7-10 M-F

MD: 10-14:45 M-F

PM: 14:45-19 M-F

WE: 10-20 Sat, 12-20 Sun

Free all other times.

Holidays run MD plan 8 AM to 8 PM, Free before 8 AM and after 8 PM

Type:	Ring:		Overlaps:		Peds:			
Fully Actuated	Standard		None		SB(4),EB(2),WB(6)			
Phase Timing	1	2	3	4	5	6	7	8
Direction	WBLT	EB	n/a	SB	EBLT	WB	n/a	NB
Enable	x	x	x	x	x	x	x	x
Walk	0	7	0	7	0	7	0	0
FDW	0	14	0	21	0	14	0	0
Min Green	5.0	5.0	0.0	5.0	5.0	5.0	0.0	5.0
Gap	3.0	4.0	0.0	3.0	3.0	4.0	0.0	3.0
Max 1	30	55	0	25	30	55	0	25
Max 2	15	70	0	35	15	70	0	35
Amber	3.5	4.1	0.0	3.5	3.5	4.1	0.0	3.5
All Red	2.1	1.0	0.0	3.3	2.4	1.0	0.0	3.3
Notes	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AM: 7-10 M-F

MD: 10-14:45 M-F

PM: 14:45-19 M-F

WE: 10-20 Sat, 12-20 Sun

Free all other times.

Holidays run MD plan 8 AM to 8 PM, Free before 8 AM and after 8 PM

Type:	Ring:		Overlaps:		Peds:			
Semi-Actuated	Standard		None		SB(8) WB(2)			
Phase Timing	1	2	3	4	5	6	7	8
Direction	EBLT	WB	n/a	NB FS	WBLT	EB	n/a	SB
Enable	x	x	x	x	x	x	x	x
Walk	0	8	0	0	0	0	0	7
FDW	0	33	0	0	0	0	0	23
Min Green	5.0	5.0	0.0	10.0	5.0	5.0	0.0	5.0
Gap	3.0	4.0	0.0	3.0	3.0	4.0	0.0	3.0
Max 1	30	55	0	35	30	55	0	35
Max 2	15	70	0	35	15	70	0	35
Amber	3.5	4.1	0.0	3.5	3.5	4.1	0.0	3.5
All Red	3.0	1.5	0.0	3.6	2.0	1.5	0.0	3.6
Notes	0	Max	0.0	0.0	0.0	Max	0.0	0.0
AM:	7-10 M-F							
MD:	10-14:45 M-F							
PM:	14:45-19 M-F							
WE:	10-20 Sat, 12-20 Sun							

Free all other times.

Holidays run MD plan 8 AM to 8 PM, Free before 8 AM and after 8 PM

Appendix C

Capacity Analysis

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	4	8	1867	28	1	7	1104	0	1	0	2	1
Future Volume (veh/h)	4	8	1867	28	1	7	1104	0	1	0	2	1
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			
Adj Sat Flow, veh/h/ln	1435	1732	1746		2057	1952	2057	556	2057	2057	1806	
Adj Flow Rate, veh/h	9	2098	31		8	1240	0	1	0	2	1	
Peak Hour Factor	0.89	0.89	0.89		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	25	5	4		0	7	0	100	0	0	0	0
Cap, veh/h	28	4309	64		38	4772	0	64	0	43	61	
Arrive On Green	0.02	0.90	0.89		0.04	1.00	0.00	0.02	0.00	0.02	0.02	0.02
Sat Flow, veh/h	1367	4800	71		1959	5505	0	1056	0	1743	933	
Grp Volume(v), veh/h	9	1377	752		8	1240	0	1	0	2	1	
Grp Sat Flow(s), veh/h/ln	1367	1576	1719		1959	1777	0	1056	0	1743	933	
Q Serve(g_s), s	1.2	15.1	15.2		0.8	0.0	0.0	0.1	0.0	0.2	0.1	
Cycle Q Clear(g_c), s	1.2	15.1	15.2		0.8	0.0	0.0	1.6	0.0	0.2	1.6	
Prop In Lane	1.00		0.04		1.00		0.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	28	2829	1543		38	4772	0	64	0	43	61	
V/C Ratio(X)	0.32	0.49	0.49		0.21	0.26	0.00	0.02	0.00	0.05	0.02	
Avail Cap(c_a), veh/h	173	2829	1543		221	4772	0	366	0	383	327	
HCM Platoon Ratio	1.00	1.00	1.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	0.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	91.8	1.8	1.8		89.9	0.0	0.0	91.9	0.0	90.5	91.9	
Incr Delay (d2), s/veh	6.4	0.6	1.1		2.6	0.1	0.0	0.1	0.0	0.4	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%), veh/ln	0.9	5.5	6.4		0.7	0.1	0.0	0.1	0.0	0.2	0.1	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	98.2	2.4	2.9		92.5	0.1	0.0	92.0	0.0	90.9	92.0	
LnGrp LOS	F	A	A		F	A	A	F	A	F	F	
Approach Vol, veh/h		2138				1248				3		
Approach Delay, s/veh		2.9				0.7				91.3		
Approach LOS		A				A				F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	173.7		9.0	7.8	173.2		9.0				
Change Period (Y+Rc), s	5.6	5.1		* 6.8	5.9	5.1		* 6.8				
Max Green Setting (Gmax), s	19.4	113.9		* 39	22.1	110.9		* 39				
Max Q Clear Time (g_c+l1), s	2.8	17.2		3.6	3.2	2.0		3.6				
Green Ext Time (p_c), s	0.0	21.6		0.0	0.0	8.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			2.4									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Movement	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗
Traffic Volume (veh/h)	0	6
Future Volume (veh/h)	0	6
Initial Q (Q _b), veh	0	0
Ped-Bike Adj(A_pbT)	1.00	
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1806	1554
Adj Flow Rate, veh/h	0	7
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	0	17
Cap, veh/h	0	33
Arrive On Green	0.00	0.02
Sat Flow, veh/h	0	1317
Grp Volume(v), veh/h	0	7
Grp Sat Flow(s), veh/h/ln	0	1317
Q Serve(g_s), s	0.0	1.0
Cycle Q Clear(g_c), s	0.0	1.0
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	0	33
V/C Ratio(X)	0.00	0.21
Avail Cap(c_a), veh/h	0	289
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	90.8
Incr Delay (d2), s/veh	0.0	3.2
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.7
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	0.0	94.1
LnGrp LOS	A	F
Approach Vol, veh/h	8	
Approach Delay, s/veh	93.8	
Approach LOS		F
Timer - Assigned Phs		

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	8	1867	28	1	7	1104	0	1	0	2	1
Future Volume (vph)	4	8	1867	28	1	7	1104	0	1	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			4%				-4%			-4%		
Storage Length (ft)	250			0		150		0	0		50	0
Storage Lanes		1			0		1		0	0	1	0
Taper Length (ft)		75				50			25		25	
Lane Util. Factor	0.91	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00
Fr _t			0.998								0.850	
Flt Protected			0.950				0.950				0.950	
Satd. Flow (prot)	0	1508	4832	0	0	1841	4945	0	0	921	1647	0
Flt Permitted			0.336				0.465				0.757	
Satd. Flow (perm)	0	533	4832	0	0	901	4945	0	0	734	1647	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			2								44	
Link Speed (mph)			35				35			25		
Link Distance (ft)			641				495			200		
Travel Time (s)			12.5				9.6			5.5		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	25%	5%	4%	0%	0%	7%	0%	100%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	2129	0	0	9	1240	0	0	1	2	0
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5				1				8		8	4
Detector Phase	5	5	2		1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.9	10.9	31.1		10.6	10.6	31.1		11.8	11.8	11.8	39.8
Total Split (s)	28.0	28.0	119.0		25.0	25.0	116.0		46.0	46.0	46.0	46.0
Total Split (%)	14.7%	14.7%	62.6%		13.2%	13.2%	61.1%		24.2%	24.2%	24.2%	24.2%
Maximum Green (s)	22.1	22.1	113.9		19.4	19.4	110.9		39.2	39.2	39.2	39.2
Yellow Time (s)	3.5	3.5	4.1		3.5	3.5	4.1		3.5	3.5	3.5	3.5
All-Red Time (s)	2.4	2.4	1.0		2.1	2.1	1.0		3.3	3.3	3.3	3.3
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0			-2.5	-2.5		
Total Lost Time (s)			3.9	3.1			3.6	3.1		4.3	4.3	
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag					
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	4.0		3.0	3.0	4.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min		None	None	C-Min		None	None	None	None
Walk Time (s)			7.0				7.0				7.0	
Flash Dont Walk (s)			14.0				14.0				21.0	
Pedestrian Calls (#/hr)			5				5				5	
Act Effct Green (s)	17.8	170.4			13.0	166.9			12.8	12.8		
Actuated g/C Ratio	0.09	0.90			0.07	0.88			0.07	0.07		
v/c Ratio	0.26	0.49			0.15	0.29			0.02	0.01		
Control Delay	87.9	6.2			77.9	5.5			75.0	0.0		
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		



Lane Group	SBT	SBR
Lane Configurations	↔	↑
Traffic Volume (vph)	0	6
Future Volume (vph)	0	6
Ideal Flow (vphpl)	1900	1900
Grade (%)	4%	
Storage Length (ft)	50	
Storage Lanes	1	
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Fr _t	0.850	
Flt Protected	0.950	
Satd. Flow (prot)	1769	1353
Flt Permitted	0.757	
Satd. Flow (perm)	1410	1353
Right Turn on Red	Yes	
Satd. Flow (RTOR)	44	
Link Speed (mph)	25	
Link Distance (ft)	200	
Travel Time (s)	5.5	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	0%	17%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1	7
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	39.8	39.8
Total Split (s)	46.0	46.0
Total Split (%)	24.2%	24.2%
Maximum Green (s)	39.2	39.2
Yellow Time (s)	3.5	3.5
All-Red Time (s)	3.3	3.3
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.3	4.3
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	21.0	21.0
Pedestrian Calls (#/hr)	5	5
Act Effct Green (s)	12.7	12.7
Actuated g/C Ratio	0.07	0.07
v/c Ratio	0.01	0.05
Control Delay	75.0	0.8
Queue Delay	0.0	0.0

3486 22-02730

Existing - AM
10: Gatewood Plaza Driveway & Fairfax Boulevard

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Total Delay	87.9	6.3			77.9	5.5			75.0	0.0		
LOS	F	A			E	A			E	A		
Approach Delay		6.7				6.1			25.0			
Approach LOS		A				A			C			
Queue Length 50th (ft)	16	0			9	0			1	0		
Queue Length 95th (ft)	40	575			m32	250			8	0		
Internal Link Dist (ft)		561				415			120			
Turn Bay Length (ft)	250				150				50			
Base Capacity (vph)	71	4333			101	4345			161	395		
Starvation Cap Reductn	0	0			0	0			0	0		
Spillback Cap Reductn	0	83			0	0			0	0		
Storage Cap Reductn	0	0			0	0			0	0		
Reduced v/c Ratio	0.18	0.50			0.09	0.29			0.01	0.01		

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 190

Offset: 153 (81%), Referenced to phase 2:EBT and 6:WBT, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 6.5

Intersection LOS: A

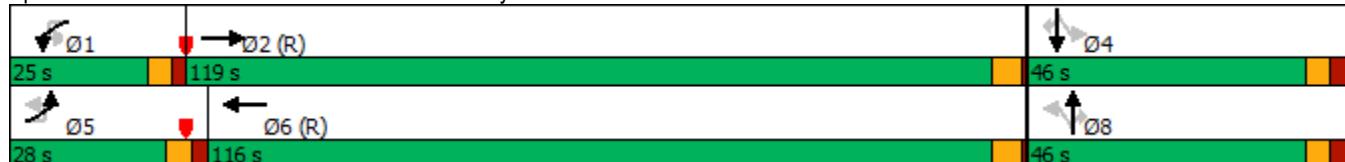
Intersection Capacity Utilization 55.5%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Gatewood Plaza Driveway & Fairfax Boulevard



3486 22-02730

Existing - AM
10: Gatewood Plaza Driveway & Fairfax Boulevard



Lane Group	SBT	SBR
Total Delay	75.0	0.8
LOS	E	A
Approach Delay	10.1	
Approach LOS	B	
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	8	0
Internal Link Dist (ft)	120	
Turn Bay Length (ft)		50
Base Capacity (vph)	309	331
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.00	0.02
Intersection Summary		

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	23	1366	2	14	4	1779	3	35	1	23	10
Future Volume (veh/h)	9	23	1366	2	14	4	1779	3	35	1	23	10
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1806	1776	1806		2057	2012	2057	2057	2057	2057	2057	1806
Adj Flow Rate, veh/h	23	1394	2		4	1815	3	36	1	23	10	
Peak Hour Factor	0.98	0.98	0.98		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0		0	3	0	0	0	0	0	0
Cap, veh/h	45	3596	5		27	3996	7	32	1	378	33	
Arrive On Green	0.03	0.72	0.71		0.03	1.00	1.00	0.22	0.22	0.22	0.22	
Sat Flow, veh/h	1720	5000	7		1959	5664	9	0	2	1743	0	
Grp Volume(v), veh/h	23	901	495		4	1174	644	37	0	23	10	
Grp Sat Flow(s), veh/h/ln	1720	1616	1775		1959	1831	2011	3	0	1743	0	
Q Serve(g_s), s	2.9	23.9	23.9		0.4	0.0	0.0	0.0	0.0	2.3	0.0	
Cycle Q Clear(g_c), s	2.9	23.9	23.9		0.4	0.0	0.0	47.7	0.0	2.3	47.7	
Prop In Lane	1.00		0.00		1.00		0.00	0.97		1.00	1.00	
Lane Grp Cap(c), veh/h	45	2325	1276		27	2584	1419	33	0	378	33	
V/C Ratio(X)	0.51	0.39	0.39		0.15	0.45	0.45	1.12	0.00	0.06	0.30	
Avail Cap(c_a), veh/h	227	2325	1276		235	2584	1419	33	0	378	33	
HCM Platoon Ratio	1.00	1.00	1.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	105.7	12.0	12.0		105.6	0.0	0.0	109.2	0.0	68.4	110.0	
Incr Delay (d2), s/veh	8.6	0.5	0.9		2.4	0.6	1.1	196.8	0.0	0.1	5.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%), veh/ln	2.6	13.8	15.1		0.4	0.4	0.7	6.7	0.0	1.9	1.1	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	114.3	12.5	12.9		108.0	0.6	1.1	306.1	0.0	68.4	115.1	
LnGrp LOS	F	B	B		F	A	A	F	A	E	F	
Approach Vol, veh/h		1419				1822				60		
Approach Delay, s/veh		14.3				1.0				215.0		
Approach LOS		B				A				F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	161.3		52.0	9.7	158.3		52.0				
Change Period (Y+Rc), s	5.6	5.1		* 6.8	5.9	5.1		* 6.8				
Max Green Setting (Gmax), s	24.4	132.9		* 45	27.1	129.9		* 45				
Max Q Clear Time (g_c+l1), s	2.4	25.9		49.7	4.9	2.0		49.7				
Green Ext Time (p_c), s	0.0	9.2		0.0	0.0	15.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay		11.1										
HCM 6th LOS		B										
Notes												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	8
Future Volume (veh/h)	0	8
Initial Q (Q _b), veh	0	0
Ped-Bike Adj(A_pbT)	1.00	
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1806	1806
Adj Flow Rate, veh/h	0	8
Peak Hour Factor	0.98	0.98
Percent Heavy Veh, %	0	0
Cap, veh/h	0	332
Arrive On Green	0.00	0.22
Sat Flow, veh/h	0	1530
Grp Volume(v), veh/h	0	8
Grp Sat Flow(s), veh/h/ln	0	1530
Q Serve(g_s), s	0.0	0.9
Cycle Q Clear(g_c), s	0.0	0.9
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	0	332
V/C Ratio(X)	0.00	0.02
Avail Cap(c_a), veh/h	0	332
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	67.8
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.7
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	67.9
LnGrp LOS	A	E
Approach Vol, veh/h	18	
Approach Delay, s/veh	94.1	
Approach LOS	F	
Timer - Assigned Phs		

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	9	23	1366	2	14	4	1779	3	35	1	23	10
Future Volume (vph)	9	23	1366	2	14	4	1779	3	35	1	23	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)							-4%			-4%		
Storage Length (ft)		250			0		150		0	0	50	0
Storage Lanes		1			0		1		0	0	1	0
Taper Length (ft)		75					50			25		25
Lane Util. Factor	0.91	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00
Fr _t											0.850	
Flt Protected			0.950				0.950				0.954	
Satd. Flow (prot)	0	1769	4984	0	0	1841	5137	0	0	1849	1647	0
Flt Permitted			0.089				0.221				0.725	
Satd. Flow (perm)	0	166	4984	0	0	428	5137	0	0	1405	1647	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)											38	
Link Speed (mph)			35				35			25		
Link Distance (ft)			641				495			200		
Travel Time (s)			12.5				9.6			5.5		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	1396	0	0	18	1818	0	0	37	23	0
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5				1				8		8	4
Detector Phase	5	5	2		1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.9	10.9	31.1		10.6	10.6	31.1		11.8	11.8	11.8	39.8
Total Split (s)	33.0	33.0	138.0		30.0	30.0	135.0		52.0	52.0	52.0	52.0
Total Split (%)	15.0%	15.0%	62.7%		13.6%	13.6%	61.4%		23.6%	23.6%	23.6%	23.6%
Maximum Green (s)	27.1	27.1	132.9		24.4	24.4	129.9		45.2	45.2	45.2	45.2
Yellow Time (s)	3.5	3.5	4.1		3.5	3.5	4.1		3.5	3.5	3.5	3.5
All-Red Time (s)	2.4	2.4	1.0		2.1	2.1	1.0		3.3	3.3	3.3	3.3
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0			-2.5	-2.5		
Total Lost Time (s)			3.9	3.1			3.6	3.1		4.3	4.3	
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag					
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	4.0		3.0	3.0	4.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min		None	None	C-Min		None	None	None	None
Walk Time (s)			7.0				7.0				7.0	
Flash Dont Walk (s)			14.0				14.0				21.0	
Pedestrian Calls (#/hr)			5				5				5	
Act Effct Green (s)	44.9	180.4			22.1	150.4			16.0	16.0		
Actuated g/C Ratio	0.20	0.82			0.10	0.68			0.07	0.07		
v/c Ratio	0.97	0.34			0.42	0.52			0.36	0.15		
Control Delay	225.1	8.5			101.1	18.7			104.1	9.0		
Queue Delay	0.0	0.0			0.0	0.2			0.0	0.0		



Lane Group	SBT	SBR
Lane Configurations	↔	↑
Traffic Volume (vph)	0	8
Future Volume (vph)	0	8
Ideal Flow (vphpl)	1900	1900
Grade (%)	4%	
Storage Length (ft)	50	
Storage Lanes	1	
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Fr _t	0.850	
Flt Protected	0.950	
Satd. Flow (prot)	1769	1583
Flt Permitted	0.733	
Satd. Flow (perm)	1365	1583
Right Turn on Red	Yes	
Satd. Flow (RTOR)	38	
Link Speed (mph)	25	
Link Distance (ft)	200	
Travel Time (s)	5.5	
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	10	8
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	39.8	39.8
Total Split (s)	52.0	52.0
Total Split (%)	23.6%	23.6%
Maximum Green (s)	45.2	45.2
Yellow Time (s)	3.5	3.5
All-Red Time (s)	3.3	3.3
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.3	4.3
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	21.0	21.0
Pedestrian Calls (#/hr)	5	5
Act Effect Green (s)	15.8	15.8
Actuated g/C Ratio	0.07	0.07
v/c Ratio	0.10	0.05
Control Delay	92.7	0.8
Queue Delay	0.0	0.0

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Total Delay	225.1		8.5		101.1	18.8			104.1	9.0		
LOS	F	A			F	B			F	A		
Approach Delay		13.3				19.6			67.7			
Approach LOS		B				B			E			
Queue Length 50th (ft)	46	198			25	461			53	0		
Queue Length 95th (ft)	#125	387			m48	449			92	15		
Internal Link Dist (ft)		561				415			120			
Turn Bay Length (ft)	250				150					50		
Base Capacity (vph)	33	4086			56	3559			304	386		
Starvation Cap Reductn	0	0			0	717			0	0		
Spillback Cap Reductn	0	0			0	0			0	0		
Storage Cap Reductn	0	0			0	0			0	0		
Reduced v/c Ratio	0.97	0.34			0.32	0.64			0.12	0.06		

Intersection Summary

Area Type: Other

Cycle Length: 220

Actuated Cycle Length: 220

Offset: 153 (70%), Referenced to phase 2:EBT and 6:WBT, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 18.0

Intersection LOS: B

Intersection Capacity Utilization 53.3%

ICU Level of Service A

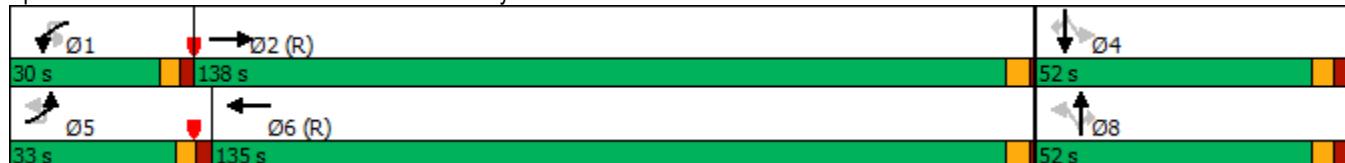
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Gatewood Plaza Driveway & Fairfax Boulevard





Lane Group	SBT	SBR
Total Delay	92.7	0.8
LOS	F	A
Approach Delay	51.8	
Approach LOS	D	
Queue Length 50th (ft)	14	0
Queue Length 95th (ft)	36	0
Internal Link Dist (ft)	120	
Turn Bay Length (ft)	50	
Base Capacity (vph)	295	372
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.03	0.02
Intersection Summary		

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No Build - AM
10: Gatewood Plaza Driveway & Fairfax Boulevard

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	4	8	1979	29	1	7	1171	0	1	0	2	1
Future Volume (veh/h)	4	8	1979	29	1	7	1171	0	1	0	2	1
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No				No		
Adj Sat Flow, veh/h/ln	1435	1732	1746		2057	1952	2057	556	2057	2057	1806	
Adj Flow Rate, veh/h	9	2224	33		8	1316	0	1	0	2	1	
Peak Hour Factor	0.89	0.89	0.89		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	25	5	4		0	7	0	100	0	0	0	0
Cap, veh/h	28	4309	64		38	4772	0	64	0	43	61	
Arrive On Green	0.02	0.90	0.89		0.04	1.00	0.00	0.02	0.00	0.02	0.02	0.02
Sat Flow, veh/h	1367	4799	71		1959	5505	0	1056	0	1743	933	
Grp Volume(v), veh/h	9	1459	798		8	1316	0	1	0	2	1	
Grp Sat Flow(s), veh/h/ln	1367	1576	1719		1959	1777	0	1056	0	1743	933	
Q Serve(g_s), s	1.2	16.8	16.9		0.8	0.0	0.0	0.1	0.0	0.2	0.1	
Cycle Q Clear(g_c), s	1.2	16.8	16.9		0.8	0.0	0.0	1.6	0.0	0.2	1.6	
Prop In Lane	1.00		0.04		1.00		0.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	28	2829	1543		38	4772	0	64	0	43	61	
V/C Ratio(X)	0.32	0.52	0.52		0.21	0.28	0.00	0.02	0.00	0.05	0.02	
Avail Cap(c_a), veh/h	173	2829	1543		221	4772	0	366	0	383	327	
HCM Platoon Ratio	1.00	1.00	1.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	0.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	91.8	1.8	1.9		89.9	0.0	0.0	91.9	0.0	90.5	91.9	
Incr Delay (d2), s/veh	6.4	0.7	1.2		2.6	0.1	0.0	0.1	0.0	0.4	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%), veh/ln	0.9	6.1	7.2		0.7	0.1	0.0	0.1	0.0	0.2	0.1	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	98.2	2.5	3.1		92.5	0.1	0.0	92.0	0.0	90.9	92.0	
LnGrp LOS	F	A	A		F	A	A	F	A	F	F	
Approach Vol, veh/h		2266				1324				3		
Approach Delay, s/veh		3.1				0.7				91.3		
Approach LOS		A				A				F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	173.7		9.0	7.8	173.2		9.0				
Change Period (Y+Rc), s	5.6	5.1		* 6.8	5.9	5.1		* 6.8				
Max Green Setting (Gmax), s	19.4	113.9		* 39	22.1	110.9		* 39				
Max Q Clear Time (g_c+l1), s	2.8	18.9		3.6	3.2	2.0		3.6				
Green Ext Time (p_c), s	0.0	24.9		0.0	0.0	9.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay		2.5										
HCM 6th LOS		A										
Notes												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	6
Future Volume (veh/h)	0	6
Initial Q (Q _b), veh	0	0
Ped-Bike Adj(A_pbT)	1.00	
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1806	1554
Adj Flow Rate, veh/h	0	7
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	0	17
Cap, veh/h	0	33
Arrive On Green	0.00	0.02
Sat Flow, veh/h	0	1317
Grp Volume(v), veh/h	0	7
Grp Sat Flow(s), veh/h/ln	0	1317
Q Serve(g_s), s	0.0	1.0
Cycle Q Clear(g_c), s	0.0	1.0
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	0	33
V/C Ratio(X)	0.00	0.21
Avail Cap(c_a), veh/h	0	289
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	90.8
Incr Delay (d2), s/veh	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.7
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	94.1
LnGrp LOS	A	F
Approach Vol, veh/h	8	
Approach Delay, s/veh	93.8	
Approach LOS		F
Timer - Assigned Phs		

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	8	1979		29	1	7	1171	0	1	0	2
Future Volume (vph)	4	8	1979		29	1	7	1171	0	1	0	2
Ideal Flow (vphpl)	1900	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)								-4%			-4%	
Storage Length (ft)		250			0		150		0	0		50
Storage Lanes					1		0		0	0		1
Taper Length (ft)							50			25		25
Lane Util. Factor	0.91	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00
Fr _t					0.998							0.850
Flt Protected					0.950			0.950				0.950
Satd. Flow (prot)	0	1508	4832		0	0	1841	4945	0	0	921	1647
Flt Permitted					0.336			0.465				0.757
Satd. Flow (perm)	0	533	4832		0	0	901	4945	0	0	734	1647
Right Turn on Red					Yes				Yes			Yes
Satd. Flow (RTOR)					2							44
Link Speed (mph)					35			35				25
Link Distance (ft)					641			495				200
Travel Time (s)					12.5			9.6				5.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	25%	5%	4%	0%	0%	7%	0%	100%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	2257		0	0	9	1316	0	0	1	2
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	Perm
Protected Phases		5	2				1	6				8
Permitted Phases	5					1				8		8
Detector Phase	5	5	2		1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.9	10.9	31.1		10.6	10.6	31.1		11.8	11.8	11.8	39.8
Total Split (s)	28.0	28.0	119.0		25.0	25.0	116.0		46.0	46.0	46.0	46.0
Total Split (%)	14.7%	14.7%	62.6%		13.2%	13.2%	61.1%		24.2%	24.2%	24.2%	24.2%
Maximum Green (s)	22.1	22.1	113.9		19.4	19.4	110.9		39.2	39.2	39.2	39.2
Yellow Time (s)	3.5	3.5	4.1		3.5	3.5	4.1		3.5	3.5	3.5	3.5
All-Red Time (s)	2.4	2.4	1.0		2.1	2.1	1.0		3.3	3.3	3.3	3.3
Lost Time Adjust (s)		-2.0	-2.0			-2.0	-2.0		-2.5	-2.5		
Total Lost Time (s)		3.9	3.1			3.6	3.1		4.3	4.3		
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag					
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	4.0		3.0	3.0	4.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min		None	None	C-Min		None	None	None	None
Walk Time (s)			7.0				7.0					7.0
Flash Dont Walk (s)			14.0				14.0					21.0
Pedestrian Calls (#/hr)			5				5					5
Act Effct Green (s)		17.8	170.4			13.0	166.9			12.8	12.8	
Actuated g/C Ratio		0.09	0.90			0.07	0.88			0.07	0.07	
v/c Ratio		0.26	0.52			0.15	0.30			0.02	0.01	
Control Delay		87.9	6.6			78.9	5.3		75.0	0.0		
Queue Delay		0.0	0.0			0.0	0.0			0.0	0.0	



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	6
Future Volume (vph)	0	6
Ideal Flow (vphpl)	1900	1900
Grade (%)	4%	
Storage Length (ft)	50	
Storage Lanes	1	
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Fr _t	0.850	
Flt Protected	0.950	
Satd. Flow (prot)	1769	1353
Flt Permitted	0.757	
Satd. Flow (perm)	1410	1353
Right Turn on Red	Yes	
Satd. Flow (RTOR)	44	
Link Speed (mph)	25	
Link Distance (ft)	200	
Travel Time (s)	5.5	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	0%	17%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1	7
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	39.8	39.8
Total Split (s)	46.0	46.0
Total Split (%)	24.2%	24.2%
Maximum Green (s)	39.2	39.2
Yellow Time (s)	3.5	3.5
All-Red Time (s)	3.3	3.3
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.3	4.3
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	21.0	21.0
Pedestrian Calls (#/hr)	5	5
Act Effct Green (s)	12.7	12.7
Actuated g/C Ratio	0.07	0.07
v/c Ratio	0.01	0.05
Control Delay	75.0	0.8
Queue Delay	0.0	0.0

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No Build - AM
10: Gatewood Plaza Driveway & Fairfax Boulevard

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Total Delay	87.9	6.6			78.9	5.3			75.0	0.0		
LOS	F	A			E	A			E	A		
Approach Delay		7.1				5.8			25.0			
Approach LOS		A				A			C			
Queue Length 50th (ft)	16	0			10	0			1	0		
Queue Length 95th (ft)	40	635			m32	229			8	0		
Internal Link Dist (ft)		561				415			120			
Turn Bay Length (ft)	250				150				50			
Base Capacity (vph)	71	4333			101	4345			161	395		
Starvation Cap Reductn	0	0			0	0			0	0		
Spillback Cap Reductn	0	59			0	0			0	0		
Storage Cap Reductn	0	0			0	0			0	0		
Reduced v/c Ratio	0.18	0.53			0.09	0.30			0.01	0.01		

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 190

Offset: 153 (81%), Referenced to phase 2:EBT and 6:WBT, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 6.6

Intersection LOS: A

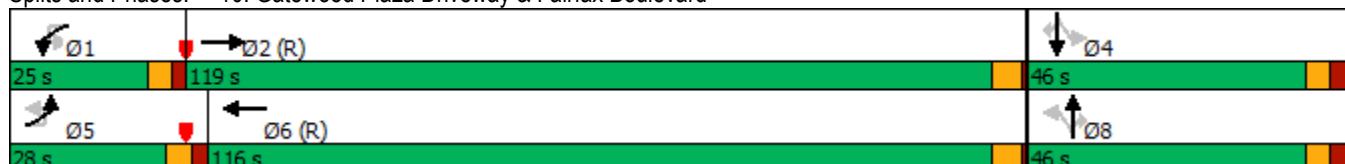
Intersection Capacity Utilization 57.7%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Gatewood Plaza Driveway & Fairfax Boulevard





Lane Group	SBT	SBR
Total Delay	75.0	0.8
LOS	E	A
Approach Delay	10.1	
Approach LOS	B	
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	8	0
Internal Link Dist (ft)	120	
Turn Bay Length (ft)		50
Base Capacity (vph)	309	331
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.00	0.02
Intersection Summary		

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	23	1452	2	14	4	1889	3	36	1	23	10
Future Volume (veh/h)	9	23	1452	2	14	4	1889	3	36	1	23	10
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No				No		
Adj Sat Flow, veh/h/ln	1806	1776	1806		2057	2012	2057	2057	2057	2057	2057	1806
Adj Flow Rate, veh/h	23	1482	2		4	1928	3	37	1	23	10	
Peak Hour Factor	0.98	0.98	0.98		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0		0	3	0	0	0	0	0	0
Cap, veh/h	45	3596	5		27	3997	6	32	1	378	33	
Arrive On Green	0.03	0.72	0.71		0.03	1.00	1.00	0.22	0.22	0.22	0.22	
Sat Flow, veh/h	1720	5001	7		1959	5664	9	0	2	1743	0	
Grp Volume(v), veh/h	23	958	526		4	1247	684	38	0	23	10	
Grp Sat Flow(s), veh/h/ln	1720	1616	1775		1959	1831	2011	3	0	1743	0	
Q Serve(g_s), s	2.9	26.0	26.0		0.4	0.0	0.0	0.0	0.0	2.3	0.0	
Cycle Q Clear(g_c), s	2.9	26.0	26.0		0.4	0.0	0.0	47.7	0.0	2.3	47.7	
Prop In Lane	1.00		0.00		1.00		0.00	0.97		1.00	1.00	
Lane Grp Cap(c), veh/h	45	2325	1276		27	2584	1419	33	0	378	33	
V/C Ratio(X)	0.51	0.41	0.41		0.15	0.48	0.48	1.16	0.00	0.06	0.30	
Avail Cap(c_a), veh/h	227	2325	1276		235	2584	1419	33	0	378	33	
HCM Platoon Ratio	1.00	1.00	1.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	105.7	12.3	12.3		105.6	0.0	0.0	109.3	0.0	68.4	110.0	
Incr Delay (d2), s/veh	8.6	0.5	1.0		2.4	0.6	1.2	207.3	0.0	0.1	5.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	2.6	14.9	16.3		0.4	0.4	0.8	6.9	0.0	1.9	1.1	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.3	12.9	13.3		108.0	0.6	1.2	316.6	0.0	68.4	115.1	
LnGrp LOS	F	B	B		F	A	A	F	A	E	F	
Approach Vol, veh/h		1507				1935				61		
Approach Delay, s/veh		14.6				1.1				223.0		
Approach LOS		B				A				F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	161.3		52.0	9.7	158.3		52.0				
Change Period (Y+Rc), s	5.6	5.1		* 6.8	5.9	5.1		* 6.8				
Max Green Setting (Gmax), s	24.4	132.9		* 45	27.1	129.9		* 45				
Max Q Clear Time (g_c+l1), s	2.4	28.0		49.7	4.9	2.0		49.7				
Green Ext Time (p_c), s	0.0	10.2		0.0	0.0	17.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay		11.2										
HCM 6th LOS		B										
Notes												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	8
Future Volume (veh/h)	0	8
Initial Q (Q _b), veh	0	0
Ped-Bike Adj(A_pbT)	1.00	
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1806	1806
Adj Flow Rate, veh/h	0	8
Peak Hour Factor	0.98	0.98
Percent Heavy Veh, %	0	0
Cap, veh/h	0	332
Arrive On Green	0.00	0.22
Sat Flow, veh/h	0	1530
Grp Volume(v), veh/h	0	8
Grp Sat Flow(s), veh/h/ln	0	1530
Q Serve(g_s), s	0.0	0.9
Cycle Q Clear(g_c), s	0.0	0.9
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	0	332
V/C Ratio(X)	0.00	0.02
Avail Cap(c_a), veh/h	0	332
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	67.8
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.7
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	67.9
LnGrp LOS	A	E
Approach Vol, veh/h	18	
Approach Delay, s/veh	94.1	
Approach LOS	F	
Timer - Assigned Phs		

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Group												
Lane Configurations												
Traffic Volume (vph)	9	23	1452	2	14	4	1889	3	36	1	23	10
Future Volume (vph)	9	23	1452	2	14	4	1889	3	36	1	23	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			4%				-4%			-4%		
Storage Length (ft)		250		0		150		0	0		50	0
Storage Lanes		1		0		1		0	0		1	0
Taper Length (ft)		75				50			25			25
Lane Util. Factor	0.91	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00
Fr _t												0.850
Flt Protected		0.950				0.950					0.954	
Satd. Flow (prot)	0	1769	4984	0	0	1841	5137	0	0	1849	1647	0
Flt Permitted		0.093				0.221					0.725	
Satd. Flow (perm)	0	173	4984	0	0	428	5137	0	0	1405	1647	0
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)												38
Link Speed (mph)		35				35				25		
Link Distance (ft)		641				495				200		
Travel Time (s)		12.5				9.6				5.5		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	1484	0	0	18	1931	0	0	38	23	0
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5				1				8		8	4
Detector Phase	5	5	2		1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.9	10.9	31.1		10.6	10.6	31.1		11.8	11.8	11.8	39.8
Total Split (s)	33.0	33.0	138.0		30.0	30.0	135.0		52.0	52.0	52.0	52.0
Total Split (%)	15.0%	15.0%	62.7%		13.6%	13.6%	61.4%		23.6%	23.6%	23.6%	23.6%
Maximum Green (s)	27.1	27.1	132.9		24.4	24.4	129.9		45.2	45.2	45.2	45.2
Yellow Time (s)	3.5	3.5	4.1		3.5	3.5	4.1		3.5	3.5	3.5	3.5
All-Red Time (s)	2.4	2.4	1.0		2.1	2.1	1.0		3.3	3.3	3.3	3.3
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0			-2.5	-2.5		
Total Lost Time (s)		3.9	3.1			3.6	3.1		4.3	4.3		
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag					
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	4.0		3.0	3.0	4.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min		None	None	C-Min		None	None	None	None
Walk Time (s)		7.0				7.0				7.0		
Flash Dont Walk (s)		14.0				14.0					21.0	
Pedestrian Calls (#/hr)		5				5						5
Act Effct Green (s)	42.9	180.3			22.1	152.3			16.1	16.1		
Actuated g/C Ratio	0.20	0.82			0.10	0.69			0.07	0.07		
v/c Ratio	0.97	0.36			0.42	0.54			0.37	0.15		
Control Delay	225.6	8.7			106.2	16.5			104.5	9.0		
Queue Delay	0.0	0.0			0.0	0.2			0.0	0.0		



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	8
Future Volume (vph)	0	8
Ideal Flow (vphpl)	1900	1900
Grade (%)	4%	
Storage Length (ft)	50	
Storage Lanes	1	
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Fr _t	0.850	
Flt Protected	0.950	
Satd. Flow (prot)	1769	1583
Flt Permitted	0.726	
Satd. Flow (perm)	1352	1583
Right Turn on Red	Yes	
Satd. Flow (RTOR)	38	
Link Speed (mph)	25	
Link Distance (ft)	200	
Travel Time (s)	5.5	
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	10	8
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	39.8	39.8
Total Split (s)	52.0	52.0
Total Split (%)	23.6%	23.6%
Maximum Green (s)	45.2	45.2
Yellow Time (s)	3.5	3.5
All-Red Time (s)	3.3	3.3
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.3	4.3
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	21.0	21.0
Pedestrian Calls (#/hr)	5	5
Act Effect Green (s)	15.9	15.9
Actuated g/C Ratio	0.07	0.07
v/c Ratio	0.10	0.05
Control Delay	92.6	0.6
Queue Delay	0.0	0.0

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No Build - PM
10: Gatewood Plaza Driveway & Fairfax Boulevard

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Total Delay	225.6		8.7		106.2		16.7		104.5		9.0	
LOS	F	A			F	B			F		A	
Approach Delay		13.3					17.6			68.5		
Approach LOS		B					B			E		
Queue Length 50th (ft)	46	217			25		509		54		0	
Queue Length 95th (ft)	#134	419			m50		305		95		15	
Internal Link Dist (ft)		561					415			120		
Turn Bay Length (ft)	250				150					50		
Base Capacity (vph)	33	4084			56		3557		304		386	
Starvation Cap Reductn	0	0			0		671		0		0	
Spillback Cap Reductn	0	0			0		0		0		0	
Storage Cap Reductn	0	0			0		0		0		0	
Reduced v/c Ratio	0.97	0.36			0.32		0.67		0.13		0.06	

Intersection Summary

Area Type: Other

Cycle Length: 220

Actuated Cycle Length: 220

Offset: 153 (70%), Referenced to phase 2:EBT and 6:WBT, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 16.8

Intersection LOS: B

Intersection Capacity Utilization 55.4%

ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Gatewood Plaza Driveway & Fairfax Boulevard





Lane Group	SBT	SBR
Total Delay	92.6	0.6
LOS	F	A
Approach Delay	51.7	
Approach LOS	D	
Queue Length 50th (ft)	14	0
Queue Length 95th (ft)	37	0
Internal Link Dist (ft)	120	
Turn Bay Length (ft)	50	
Base Capacity (vph)	293	372
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.03	0.02
Intersection Summary		

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	4	34	1979	29	1	7	1190	0	1	0	2	11
Future Volume (veh/h)	4	34	1979	29	1	7	1190	0	1	0	2	11
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			
Adj Sat Flow, veh/h/ln	1435	1732	1746		2057	1952	2057	556	2057	2057	1806	
Adj Flow Rate, veh/h	38	2224	33		8	1337	0	1	0	2	12	
Peak Hour Factor	0.89	0.89	0.89		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	25	5	4		0	7	0	100	0	0	0	0
Cap, veh/h	60	4039	60		38	4349	0	40	0	141	41	
Arrive On Green	0.04	0.84	0.83		0.04	1.00	0.00	0.08	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1367	4799	71		1959	5505	0	23	0	1743	36	
Grp Volume(v), veh/h	38	1459	798		8	1337	0	1	0	2	12	
Grp Sat Flow(s), veh/h/ln	1367	1576	1719		1959	1777	0	23	0	1743	37	
Q Serve(g_s), s	5.2	26.0	26.1		0.8	0.0	0.0	0.1	0.0	0.2	0.4	
Cycle Q Clear(g_c), s	5.2	26.0	26.1		0.8	0.0	0.0	15.3	0.0	0.2	15.4	
Prop In Lane	1.00		0.04		1.00		0.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	60	2652	1446		38	4349	0	40	0	141	41	
V/C Ratio(X)	0.64	0.55	0.55		0.21	0.31	0.00	0.03	0.00	0.01	0.29	
Avail Cap(c_a), veh/h	173	2652	1446		221	4349	0	253	0	383	230	
HCM Platoon Ratio	1.00	1.00	1.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	0.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	89.4	4.4	4.5		89.9	0.0	0.0	94.8	0.0	80.3	94.9	
Incr Delay (d2), s/veh	10.8	0.8	1.5		2.6	0.2	0.0	0.3	0.0	0.0	3.9	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	3.7	11.9	13.3		0.7	0.1	0.0	0.1	0.0	0.2	1.2	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.2	5.3	6.0		92.5	0.2	0.0	95.1	0.0	80.4	98.9	
LnGrp LOS	F	A	A		F	A	A	F	A	F	F	
Approach Vol, veh/h		2295				1345				3		
Approach Delay, s/veh		7.1				0.7				85.3		
Approach LOS		A				A				F		

Timer - Assigned Phs

	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	7.3	162.8	19.9	12.2	158.0	19.9
Change Period (Y+Rc), s	5.6	5.1	* 6.8	5.9	5.1	* 6.8
Max Green Setting (Gmax), s	19.4	113.9	* 39	22.1	110.9	* 39
Max Q Clear Time (g_c+l1), s	2.8	28.1	17.4	7.2	2.0	17.3
Green Ext Time (p_c), s	0.0	24.5	0.0	0.1	9.7	0.0

Intersection Summary

HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	11
Future Volume (veh/h)	0	11
Initial Q (Q _b), veh	0	0
Ped-Bike Adj(A_pbT)	1.00	
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1806	1554
Adj Flow Rate, veh/h	0	12
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	0	17
Cap, veh/h	0	107
Arrive On Green	0.00	0.08
Sat Flow, veh/h	0	1317
Grp Volume(v), veh/h	0	12
Grp Sat Flow(s), veh/h/ln	0	1317
Q Serve(g_s), s	0.0	1.6
Cycle Q Clear(g_c), s	0.0	1.6
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	0	107
V/C Ratio(X)	0.00	0.11
Avail Cap(c_a), veh/h	0	289
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	81.0
Incr Delay (d2), s/veh	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	1.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	0.0	81.4
LnGrp LOS	A	F
Approach Vol, veh/h	24	
Approach Delay, s/veh	90.1	
Approach LOS	F	
Timer - Assigned Phs		

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Group												
Lane Configurations												
Traffic Volume (vph)	4	34	1979		29	1	7	1190	0	1	0	2
Future Volume (vph)	4	34	1979		29	1	7	1190	0	1	0	2
Ideal Flow (vphpl)	1900	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)								-4%			-4%	
Storage Length (ft)		250			0		150		0	0		50
Storage Lanes		1			0		1		0	0		1
Taper Length (ft)		75					50			25		25
Lane Util. Factor	0.91	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00
Fr _t					0.998							0.850
Flt Protected			0.950				0.950					0.950
Satd. Flow (prot)	0	1443	4832		0	0	1841	4945	0	0	921	1647
Flt Permitted			0.069				0.465					0.750
Satd. Flow (perm)	0	105	4832		0	0	901	4945	0	0	727	1647
Right Turn on Red					Yes				Yes			Yes
Satd. Flow (RTOR)			2									44
Link Speed (mph)			35				35					25
Link Distance (ft)			641				495					200
Travel Time (s)			12.5				9.6					5.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	25%	5%	4%	0%	0%	7%	0%	100%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	2257		0	0	9	1337	0	0	1	2
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	Perm
Protected Phases		5	2				1	6				8
Permitted Phases	5					1				8		8
Detector Phase	5	5	2		1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	12.9	12.9	31.1		10.6	10.6	31.1		11.8	11.8	11.8	39.8
Total Split (s)	28.0	28.0	119.0		25.0	25.0	116.0		46.0	46.0	46.0	46.0
Total Split (%)	14.7%	14.7%	62.6%		13.2%	13.2%	61.1%		24.2%	24.2%	24.2%	24.2%
Maximum Green (s)	22.1	22.1	113.9		19.4	19.4	110.9		39.2	39.2	39.2	39.2
Yellow Time (s)	3.5	3.5	4.1		3.5	3.5	4.1		3.5	3.5	3.5	3.5
All-Red Time (s)	2.4	2.4	1.0		2.1	2.1	1.0		3.3	3.3	3.3	3.3
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0			-2.5	-2.5		
Total Lost Time (s)			3.9	3.1			3.6	3.1		4.3	4.3	
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag					
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	4.0		3.0	3.0	4.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min		None	None	C-Min		None	None	None	None
Walk Time (s)			7.0				7.0					7.0
Flash Dont Walk (s)			14.0				14.0					21.0
Pedestrian Calls (#/hr)			5				5					5
Act Effct Green (s)	57.7	166.6			13.0	112.5			13.4	13.4		
Actuated g/C Ratio	0.30	0.88			0.07	0.59			0.07	0.07		
v/c Ratio	1.35	0.53			0.15	0.46			0.02	0.01		
Control Delay	323.6	7.1			79.5	20.9			75.0	0.0		
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		



Lane Group	SBT	SBR
Lane Configurations	↔	↑
Traffic Volume (vph)	0	11
Future Volume (vph)	0	11
Ideal Flow (vphpl)	1900	1900
Grade (%)	4%	
Storage Length (ft)	50	
Storage Lanes	1	
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Fr _t	0.850	
Flt Protected	0.950	
Satd. Flow (prot)	1769	1353
Flt Permitted	0.757	
Satd. Flow (perm)	1410	1353
Right Turn on Red	Yes	
Satd. Flow (RTOR)	44	
Link Speed (mph)	25	
Link Distance (ft)	200	
Travel Time (s)	5.5	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	0%	17%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	12	12
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases	4	
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	39.8	39.8
Total Split (s)	46.0	46.0
Total Split (%)	24.2%	24.2%
Maximum Green (s)	39.2	39.2
Yellow Time (s)	3.5	3.5
All-Red Time (s)	3.3	3.3
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.3	4.3
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	21.0	21.0
Pedestrian Calls (#/hr)	5	5
Act Effect Green (s)	13.5	13.5
Actuated g/C Ratio	0.07	0.07
v/c Ratio	0.12	0.09
Control Delay	80.4	1.3
Queue Delay	0.0	0.0



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Total Delay	323.6	7.1			79.5	20.9			75.0	0.0		
LOS	F	A			E	C			E	A		
Approach Delay		12.9				21.2			25.0			
Approach LOS		B				C			C			
Queue Length 50th (ft)	~69	118			11	330			1	0		
Queue Length 95th (ft)	#169	635			m31	243			8	0		
Internal Link Dist (ft)		561				415			120			
Turn Bay Length (ft)	250				150					50		
Base Capacity (vph)	31	4237			101	3000			159	395		
Starvation Cap Reductn	0	0			0	0			0	0		
Spillback Cap Reductn	0	65			0	0			0	0		
Storage Cap Reductn	0	0			0	0			0	0		
Reduced v/c Ratio	1.35	0.54			0.09	0.45			0.01	0.01		

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 190

Offset: 153 (81%), Referenced to phase 2:EBT and 6:WBT, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.35

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 57.7%

ICU Level of Service B

Analysis Period (min) 15

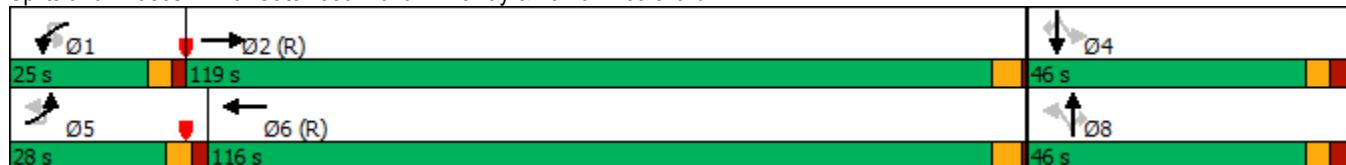
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Gatewood Plaza Driveway & Fairfax Boulevard



Lane Group	SBT	SBR
Total Delay	80.4	1.3
LOS	F	A
Approach Delay	40.8	
Approach LOS	D	
Queue Length 50th (ft)	15	0
Queue Length 95th (ft)	36	0
Internal Link Dist (ft)	120	
Turn Bay Length (ft)	50	
Base Capacity (vph)	309	331
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.04	0.04
Intersection Summary		

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	43	1452	2	14	4	1903	3	36	1	23	17
Future Volume (veh/h)	9	43	1452	2	14	4	1903	3	36	1	23	17
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			
Adj Sat Flow, veh/h/ln	1806	1776	1806		2057	2012	2057	2057	2057	2057	2057	1806
Adj Flow Rate, veh/h	44	1482	2		4	1942	3	37	1	23	17	
Peak Hour Factor	0.98	0.98	0.98		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0		0	3	0	0	0	0	0	0
Cap, veh/h	71	3596	5		27	3911	6	32	1	378	33	
Arrive On Green	0.04	0.72	0.71		0.03	1.00	1.00	0.22	0.22	0.22	0.22	
Sat Flow, veh/h	1720	5001	7		1959	5664	9	0	2	1743	0	
Grp Volume(v), veh/h	44	958	526		4	1256	689	38	0	23	17	
Grp Sat Flow(s), veh/h/ln	1720	1616	1775		1959	1831	2011	3	0	1743	0	
Q Serve(g_s), s	5.5	26.0	26.0		0.4	0.0	0.0	0.0	0.0	2.3	0.0	
Cycle Q Clear(g_c), s	5.5	26.0	26.0		0.4	0.0	0.0	47.7	0.0	2.3	47.7	
Prop In Lane	1.00		0.00		1.00		0.00	0.97		1.00	1.00	
Lane Grp Cap(c), veh/h	71	2325	1276		27	2529	1388	33	0	378	33	
V/C Ratio(X)	0.62	0.41	0.41		0.15	0.50	0.50	1.16	0.00	0.06	0.52	
Avail Cap(c_a), veh/h	227	2325	1276		235	2529	1388	33	0	378	33	
HCM Platoon Ratio	1.00	1.00	1.00		2.00	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	103.7	12.3	12.3		105.6	0.0	0.0	109.3	0.0	68.4	110.0	
Incr Delay (d2), s/veh	8.5	0.5	1.0		2.4	0.7	1.3	207.9	0.0	0.1	13.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	4.8	14.9	16.3		0.4	0.4	0.9	6.9	0.0	1.9	2.0	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.2	12.9	13.3		108.0	0.7	1.3	317.2	0.0	68.4	123.7	
LnGrp LOS	F	B	B		F	A	A	F	A	E	F	
Approach Vol, veh/h		1528				1949				61		
Approach Delay, s/veh		15.9				1.1				223.4		
Approach LOS		B				A				F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	161.3		52.0	13.0	155.0		52.0				
Change Period (Y+Rc), s	5.6	5.1		* 6.8	5.9	5.1		* 6.8				
Max Green Setting (Gmax), s	24.4	132.9		* 45	27.1	129.9		* 45				
Max Q Clear Time (g_c+l1), s	2.4	28.0		49.7	7.5	2.0		49.7				
Green Ext Time (p_c), s	0.0	10.2		0.0	0.1	17.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									
Notes												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	12
Future Volume (veh/h)	0	12
Initial Q (Q _b), veh	0	0
Ped-Bike Adj(A_pbT)	1.00	
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1806	1806
Adj Flow Rate, veh/h	0	12
Peak Hour Factor	0.98	0.98
Percent Heavy Veh, %	0	0
Cap, veh/h	0	332
Arrive On Green	0.00	0.22
Sat Flow, veh/h	0	1530
Grp Volume(v), veh/h	0	12
Grp Sat Flow(s), veh/h/ln	0	1530
Q Serve(g_s), s	0.0	1.4
Cycle Q Clear(g_c), s	0.0	1.4
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	0	332
V/C Ratio(X)	0.00	0.04
Avail Cap(c_a), veh/h	0	332
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	68.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	1.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	0.0	68.0
LnGrp LOS	A	E
Approach Vol, veh/h	29	
Approach Delay, s/veh	100.7	
Approach LOS	F	
Timer - Assigned Phs		

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Group												
Lane Configurations												
Traffic Volume (vph)	9	43	1452	2	14	4	1903	3	36	1	23	17
Future Volume (vph)	9	43	1452	2	14	4	1903	3	36	1	23	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)			4%				-4%			-4%		
Storage Length (ft)		250		0		150		0	0		50	0
Storage Lanes		1		0		1		0	0		1	0
Taper Length (ft)		75				50			25			25
Lane Util. Factor	0.91	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00
Fr _t												0.850
Flt Protected		0.950				0.950					0.954	
Satd. Flow (prot)	0	1769	4984	0	0	1841	5137	0	0	1849	1647	0
Flt Permitted		0.054				0.221					0.719	
Satd. Flow (perm)	0	101	4984	0	0	428	5137	0	0	1393	1647	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)												38
Link Speed (mph)		35				35			25			
Link Distance (ft)		641				495			200			
Travel Time (s)		12.5				9.6			5.5			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	1484	0	0	18	1945	0	0	38	23	0
Turn Type	custom	Prot	NA		custom	Prot	NA		Perm	NA	Perm	Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5				1				8		8	4
Detector Phase	5	5	2		1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.9	10.9	31.1		10.6	10.6	31.1		11.8	11.8	11.8	39.8
Total Split (s)	33.0	33.0	138.0		30.0	30.0	135.0		52.0	52.0	52.0	52.0
Total Split (%)	15.0%	15.0%	62.7%		13.6%	13.6%	61.4%		23.6%	23.6%	23.6%	23.6%
Maximum Green (s)	27.1	27.1	132.9		24.4	24.4	129.9		45.2	45.2	45.2	45.2
Yellow Time (s)	3.5	3.5	4.1		3.5	3.5	4.1		3.5	3.5	3.5	3.5
All-Red Time (s)	2.4	2.4	1.0		2.1	2.1	1.0		3.3	3.3	3.3	3.3
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0			-2.5	-2.5		
Total Lost Time (s)		3.9	3.1			3.6	3.1		4.3	4.3		
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag					
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	4.0		3.0	3.0	4.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min		None	None	C-Min		None	None	None	None
Walk Time (s)		7.0				7.0						7.0
Flash Dont Walk (s)		14.0				14.0						21.0
Pedestrian Calls (#/hr)		5				5						5
Act Effct Green (s)	73.9	180.3			22.1	121.3			16.1	16.1		
Actuated g/C Ratio	0.34	0.82			0.10	0.55			0.07	0.07		
v/c Ratio	1.56	0.36			0.42	0.69			0.38	0.15		
Control Delay	405.6	8.7			105.6	30.2			104.7	9.0		
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		



Lane Group	SBT	SBR
Lane Configurations	↔	↑
Traffic Volume (vph)	0	12
Future Volume (vph)	0	12
Ideal Flow (vphpl)	1900	1900
Grade (%)	4%	
Storage Length (ft)	50	
Storage Lanes	1	
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Fr _t	0.850	
Flt Protected	0.950	
Satd. Flow (prot)	1769	1583
Flt Permitted	0.726	
Satd. Flow (perm)	1352	1583
Right Turn on Red	Yes	
Satd. Flow (RTOR)	38	
Link Speed (mph)	25	
Link Distance (ft)	200	
Travel Time (s)	5.5	
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	17	12
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	39.8	39.8
Total Split (s)	52.0	52.0
Total Split (%)	23.6%	23.6%
Maximum Green (s)	45.2	45.2
Yellow Time (s)	3.5	3.5
All-Red Time (s)	3.3	3.3
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.3	4.3
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	21.0	21.0
Pedestrian Calls (#/hr)	5	5
Act Effect Green (s)	15.9	15.9
Actuated g/C Ratio	0.07	0.07
v/c Ratio	0.18	0.08
Control Delay	95.6	1.1
Queue Delay	0.0	0.0

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Total Delay	405.6		8.7		105.6	30.3			104.7	9.0		
LOS	F	A			F	C			F	A		
Approach Delay		22.4				31.0			68.6			
Approach LOS		C				C			E			
Queue Length 50th (ft)	~105	217			25	497			54	0		
Queue Length 95th (ft)	#241	419			m49	308			95	15		
Internal Link Dist (ft)		561				415			120			
Turn Bay Length (ft)	250				150				50			
Base Capacity (vph)	34	4084			56	3079			302	386		
Starvation Cap Reductn	0	0			0	109			0	0		
Spillback Cap Reductn	0	0			0	0			0	0		
Storage Cap Reductn	0	0			0	0			0	0		
Reduced v/c Ratio	1.56	0.36			0.32	0.65			0.13	0.06		

Intersection Summary

Area Type: Other

Cycle Length: 220

Actuated Cycle Length: 220

Offset: 153 (70%), Referenced to phase 2:EBT and 6:WBT, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.56

Intersection Signal Delay: 28.2

Intersection LOS: C

Intersection Capacity Utilization 62.0%

ICU Level of Service B

Analysis Period (min) 15

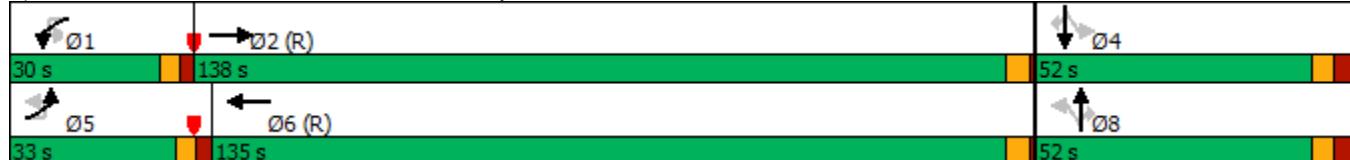
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Gatewood Plaza Driveway & Fairfax Boulevard



Lane Group	SBT	SBR
Total Delay	95.6	1.1
LOS	F	A
Approach Delay	56.5	
Approach LOS	E	
Queue Length 50th (ft)	24	0
Queue Length 95th (ft)	53	0
Internal Link Dist (ft)	120	
Turn Bay Length (ft)		50
Base Capacity (vph)	293	372
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.06	0.03
Intersection Summary		

Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	0	1870	1088	11	0	24
Future Vol, veh/h	0	1870	1088	11	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	8	27	0	38
Mvmt Flow	0	2033	1183	12	0	26

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	-	0	-	0	-	598
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.86
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.28
Pot Cap-1 Maneuver	0	-	-	-	0	318
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	318
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach EB WB SB

HCM Control Delay, s	0	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h)	-	-	-	318
HCM Lane V/C Ratio	-	-	-	0.082
HCM Control Delay (s)	-	-	-	17.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations						
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Traffic Vol, veh/h	0	1399	1780	34	0	20
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Future Vol, veh/h	0	1399	1780	34	0	20
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Free	Free	Free	Free	Stop	Stop
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	-	-	-	-	0
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Veh in Median Storage, #	-	0	0	-	0	-
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Grade, %	-	-2	0	-	0	-
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Peak Hour Factor	97	97	97	97	97	97
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Heavy Vehicles, %	0	2	3	0	0	0
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Mvmt Flow	0	1442	1835	35	0	21
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Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	-	0	-	0	-	935
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Critical Hdwy	-	-	-	-	-	7.1
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Critical Hdwy Stg 1	-	-	-	-	-	-
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Critical Hdwy Stg 2	-	-	-	-	-	-
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Follow-up Hdwy	-	-	-	-	-	3.9
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Pot Cap-1 Maneuver	0	-	-	-	0	232
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Stage 1	0	-	-	-	0	-
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Stage 2	0	-	-	-	0	-
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Platoon blocked, %	-	-	-	-	-	-
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Mov Cap-1 Maneuver	-	-	-	-	-	232
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Mov Cap-2 Maneuver	-	-	-	-	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Approach	EB	WB	SB
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HCM Control Delay, s	0	0	22
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HCM LOS			C
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Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	-	-	-	232
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HCM Lane V/C Ratio	-	-	-	0.089
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HCM Control Delay (s)	-	-	-	22
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HCM Lane LOS	-	-	-	C
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HCM 95th %tile Q(veh)	-	-	-	0.3
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Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations					
Traffic Vol, veh/h	0	1982	1155	11	0
Future Vol, veh/h	0	1982	1155	11	0
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop Stop
RT Channelized	-	None	-	None	- None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0
Grade, %	-	-2	0	-	0
Peak Hour Factor	92	92	92	92	92
Heavy Vehicles, %	0	5	8	27	0
Mvmt Flow	0	2154	1255	12	0
					26

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	-	0	-	0	-	634
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.86
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.28
Pot Cap-1 Maneuver	0	-	-	-	0	300
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	300
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach EB WB SB

HCM Control Delay, s	0	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h)	-	-	-	300
HCM Lane V/C Ratio	-	-	-	0.087
HCM Control Delay (s)	-	-	-	18.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations

Traffic Vol, veh/h 0 1485 1890 35 0 20

Future Vol, veh/h 0 1485 1890 35 0 20

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - - 0

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - -2 0 - 0 -

Peak Hour Factor 97 97 97 97 97 97

Heavy Vehicles, % 0 2 3 0 0 0

Mvmt Flow 0 1531 1948 36 0 21

Major/Minor Major1 Major2 Minor2

Conflicting Flow All - 0 - 0 - 992

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - - - - - 7.1

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - - - - - 3.9

Pot Cap-1 Maneuver 0 - - - 0 213

Stage 1 0 - - - 0 -

Stage 2 0 - - - 0 -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver - - - - - 213

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Approach EB WB SB

HCM Control Delay, s 0 0 23.7

HCM LOS C

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h) - - - 213

HCM Lane V/C Ratio - - - 0.097

HCM Control Delay (s) - - - 23.7

HCM Lane LOS - - - C

HCM 95th %tile Q(veh) - - - 0.3

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	1992	1164	16	0	34
Future Vol, veh/h	0	1992	1164	16	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	8	27	0	38
Mvmt Flow	0	2165	1265	17	0	37

Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	-	0	-	0	-	641
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.86
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.28
Pot Cap-1 Maneuver	0	-	-	-	0	297
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	297
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
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HCM Control Delay, s	0	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	-	-	-	297
HCM Lane V/C Ratio	-	-	-	0.124
HCM Control Delay (s)	-	-	-	18.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection

Int Delay, s/veh 0.2

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations					
Traffic Vol, veh/h	0	1492	1897	39	0 27
Future Vol, veh/h	0	1492	1897	39	0 27
Conflicting Peds, #/hr	0	0	0	0	0 0
Sign Control	Free	Free	Free	Free	Stop Stop
RT Channelized	-	None	-	None	- None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0 -
Grade, %	-	-2	0	-	0 -
Peak Hour Factor	97	97	97	97	97 97
Heavy Vehicles, %	0	2	3	0	0 0
Mvmt Flow	0	1538	1956	40	0 28

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	-	0	-	0	-	998
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	211
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	211
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach EB WB SB

HCM Control Delay, s	0	0	24.6
HCM LOS			C

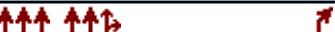
Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h)	-	-	-	211
HCM Lane V/C Ratio	-	-	-	0.132
HCM Control Delay (s)	-	-	-	24.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection

Int Delay, s/veh 0

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations 

Traffic Vol, veh/h 0 1870 1098 14 0 1

Future Vol, veh/h 0 1870 1098 14 0 1

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - - 0

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 4 -2 - -4 -

Peak Hour Factor 93 93 93 93 93 93

Heavy Vehicles, % 0 4 7 36 0 0

Mvmt Flow 0 2011 1181 15 0 1

Major/Minor Major1 Major2 Minor2

Conflicting Flow All - 0 - 0 - 598

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - - - - - 6.7

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - - - - - 3.9

Pot Cap-1 Maneuver 0 - - - 0 412

Stage 1 0 - - - 0 -

Stage 2 0 - - - 0 -

Platoon blocked, % - - - - - -

Mov Cap-1 Maneuver - - - - - 412

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Approach EB WB SB

HCM Control Delay, s 0 0 13.8

HCM LOS B

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h) - - - 412

HCM Lane V/C Ratio - - - 0.003

HCM Control Delay (s) - - - 13.8

HCM Lane LOS - - - B

HCM 95th %tile Q(veh) - - - 0

Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	0	1399	1802	5	0	12
Future Vol, veh/h	0	1399	1802	5	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-2	-	-4	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	0	1442	1858	5	0	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.7
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	259
Stage 1	0	-	-	0	-
Stage 2	0	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	259
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach EB WB SB

HCM Control Delay, s	0	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	259
HCM Lane V/C Ratio	-	-	-	0.048
HCM Control Delay (s)	-	-	-	19.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	1982	1165	14	0	1
Future Vol, veh/h	0	1982	1165	14	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-2	-	-4	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	4	7	36	0	0
Mvmt Flow	0	2131	1253	15	0	1

Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	-	0	-	0	-	634
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	392
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	392
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
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HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	-	-	-	392
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	14.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations					
Traffic Vol, veh/h	0	1485	1913	5	0
Future Vol, veh/h	0	1485	1913	5	0
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop Stop
RT Channelized	-	None	-	None	- None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0
Grade, %	-	4	-2	-	-4
Peak Hour Factor	97	97	97	97	97
Heavy Vehicles, %	0	2	3	0	0
Mvmt Flow	0	1531	1972	5	0
					12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 989
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.7
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	239
Stage 1	0	-	-	0	-
Stage 2	0	-	-	0	-
Platoon blocked, %	-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	239
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach EB WB SB

HCM Control Delay, s	0	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	239
HCM Lane V/C Ratio	-	-	-	0.052
HCM Control Delay (s)	-	-	-	20.9
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations						
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Traffic Vol, veh/h	0	1992	1170	30	0	10
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Future Vol, veh/h	0	1992	1170	30	0	10
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Free	Free	Free	Free	Stop	Stop
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	-	-	-	-	0
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Veh in Median Storage, #	-	0	0	-	0	-
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Grade, %	-	4	-2	-	-4	-
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Peak Hour Factor	93	93	93	93	93	93
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Heavy Vehicles, %	0	4	7	36	0	0
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Mvmt Flow	0	2142	1258	32	0	11
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Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	-	0	-	0	-	645
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Critical Hdwy	-	-	-	-	-	6.7
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Critical Hdwy Stg 1	-	-	-	-	-	-
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Critical Hdwy Stg 2	-	-	-	-	-	-
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Follow-up Hdwy	-	-	-	-	-	3.9
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Pot Cap-1 Maneuver	0	-	-	-	0	386
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Stage 1	0	-	-	-	0	-
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Stage 2	0	-	-	-	0	-
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Platoon blocked, %	-	-	-	-	-	-
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Mov Cap-1 Maneuver	-	-	-	-	-	386
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Mov Cap-2 Maneuver	-	-	-	-	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Approach	EB	WB	SB
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HCM Control Delay, s	0	0	14.6
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HCM LOS			B
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Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	-	-	-	386
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HCM Lane V/C Ratio	-	-	-	0.028
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HCM Control Delay (s)	-	-	-	14.6
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HCM Lane LOS	-	-	-	B
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HCM 95th %tile Q(veh)	-	-	-	0.1
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Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBRLane Configurations 

Traffic Vol, veh/h 0 1492 1917 16 0 19

Future Vol, veh/h 0 1492 1917 16 0 19

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - - 0

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 4 -2 - -4 -

Peak Hour Factor 97 97 97 97 97 97

Heavy Vehicles, % 0 2 3 0 0 0

Mvmt Flow 0 1538 1976 16 0 20

Major/Minor Major1 Major2 Minor2

Conflicting Flow All - 0 - 0 - 996

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - - - - - 6.7

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - - - - - 3.9

Pot Cap-1 Maneuver 0 - - - 0 236

Stage 1 0 - - - 0 -

Stage 2 0 - - - 0 -

Platoon blocked, % - - - - - -

Mov Cap-1 Maneuver - - - - - 236

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Approach EB WB SB

HCM Control Delay, s 0 0 21.6

HCM LOS C

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h) - - - 236

HCM Lane V/C Ratio - - - 0.083

HCM Control Delay (s) - - - 21.6

HCM Lane LOS - - - C

HCM 95th %tile Q(veh) - - - 0.3

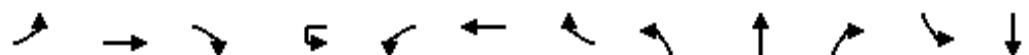
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	45	1825	0	4	1	972	44	2	0	1	123	0
Future Volume (veh/h)	45	1825	0	4	1	972	44	2	0	1	123	0
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1796	1826	1900		1876	1743	1802	1135	1876	1862	1847	1876
Adj Flow Rate, veh/h	51	2051	0		1	1092	0	2	0	1	138	0
Peak Hour Factor	0.89	0.89	0.89		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	5	0		0	9	5	50	0	1	2	0
Cap, veh/h	81	4023	0		21	3646		164	6	69	208	0
Arrive On Green	0.09	1.00	0.00		0.01	0.77	0.00	0.12	0.00	0.11	0.12	0.00
Sat Flow, veh/h	1711	5149	0		1787	4759	1527	1109	52	581	1425	0
Grp Volume(v), veh/h	51	2051	0		1	1092	0	3	0	0	138	0
Grp Sat Flow(s), veh/h/ln	1711	1662	0		1787	1586	1527	1742	0	0	1425	0
Q Serve(g_s), s	5.5	0.0	0.0		0.1	13.2	0.0	0.0	0.0	0.0	17.6	0.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0		0.1	13.2	0.0	0.3	0.0	0.0	17.9	0.0
Prop In Lane	1.00		0.00		1.00		1.00	0.67		0.33	1.00	
Lane Grp Cap(c), veh/h	81	4023	0		21	3646		240	0	0	208	0
V/C Ratio(X)	0.63	0.51	0.00		0.05	0.30		0.01	0.00	0.00	0.66	0.00
Avail Cap(c_a), veh/h	185	4023	0		165	3646		338	0	0	303	0
HCM Platoon Ratio	2.00	2.00	2.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00		1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	84.4	0.0	0.0		92.8	6.7	0.0	74.1	0.0	0.0	81.5	0.0
Incr Delay (d2), s/veh	7.8	0.5	0.0		0.9	0.2	0.0	0.0	0.0	0.0	3.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	4.5	0.3	0.0		0.1	7.9	0.0	0.2	0.0	0.0	11.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.1	0.5	0.0		93.7	6.9	0.0	74.2	0.0	0.0	85.1	0.0
LnGrp LOS	F	A	A		F	A		E	A	A	F	A
Approach Vol, veh/h	2102				1093			3			138	
Approach Delay, s/veh	2.7				7.0			74.2			85.1	
Approach LOS	A				A			E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	149.2		27.3	5.8	156.9		27.3				
Change Period (Y+Rc), s	6.5	5.6		7.1	5.5	5.6		7.1				
Max Green Setting (Gmax), s	18.5	119.4		32.9	15.5	123.4		32.9				
Max Q Clear Time (g_c+l1), s	7.5	15.2		2.3	2.1	2.0		19.9				
Green Ext Time (p_c), s	0.1	9.9		0.0	0.0	42.3		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	138
Future Volume (veh/h)	138
Initial Q (Q _b), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/in	1802
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.89
Percent Heavy Veh, %	5
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1527
Grp Volume(v), veh/h	0
Grp Sat Flow(s), veh/h/in	1527
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(95%), veh/in	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations													
Traffic Volume (vph)	45	1825		0	4	1	972	44	2	0	1	123	0
Future Volume (vph)	45	1825		0	4	1	972	44	2	0	1	123	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Grade (%)				0%			2%			2%		2%	
Storage Length (ft)	400			0		80		240	0		0	0	
Storage Lanes	1			0		1		1	0		0	0	
Taper Length (ft)	100					25			25			25	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Fr _t							0.850			0.955			
Flt Protected	0.950					0.950				0.968		0.950	
Satd. Flow (prot)	1687	4940	0	0	1787	4711	1523	0	1301	0	0	1752	
Flt Permitted	0.950					0.870				0.876		0.756	
Satd. Flow (perm)	1687	4940	0	0	1636	4711	1523	0	1177	0	0	1394	
Right Turn on Red				Yes			Yes			Yes			
Satd. Flow (RTOR)							87			47			
Link Speed (mph)		35				35			25			25	
Link Distance (ft)		187				398			200			373	
Travel Time (s)		3.6				7.8			5.5			10.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Heavy Vehicles (%)	7%	5%	0%	0%	0%	9%	5%	50%	0%	1%	2%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	51	2051	0	0	5	1092	49	0	3	0	0	138	
Turn Type	Prot	NA		custom	Prot	NA	Free	Perm	NA		Perm	NA	
Protected Phases	1	6			5	2			4			8	
Permitted Phases				5			Free	4				8	
Detector Phase	1	6		5	5	2		4	4		8	8	
Switch Phase													
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		10.0	10.0		5.0	5.0	
Minimum Split (s)	11.5	10.6		10.5	10.5	51.6		17.1	17.1		40.0	40.0	
Total Split (s)	25.0	129.0		21.0	21.0	125.0		40.0	40.0		40.0	40.0	
Total Split (%)	13.2%	67.9%		11.1%	11.1%	65.8%		21.1%	21.1%		21.1%	21.1%	
Maximum Green (s)	18.5	123.4		15.5	15.5	119.4		32.9	32.9		32.9	32.9	
Yellow Time (s)	3.5	4.1		3.5	3.5	4.1		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	1.5		2.0	2.0	1.5		3.6	3.6		3.6	3.6	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.5			-2.5		
Total Lost Time (s)	4.5	3.6			3.5	3.6		4.6				4.6	
Lead/Lag	Lead	Lag		Lead	Lead	Lag							
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	4.0		3.0	3.0	4.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None	
Walk Time (s)							8.0				7.0	7.0	
Flash Dont Walk (s)							33.0				23.0	23.0	
Pedestrian Calls (#/hr)						5				5	5		
Act Effct Green (s)	13.2	151.5			10.3	140.1	190.0		26.6			26.6	
Actuated g/C Ratio	0.07	0.80			0.05	0.74	1.00		0.14			0.14	
v/c Ratio	0.44	0.52			0.06	0.31	0.03		0.01			0.71	
Control Delay	96.8	9.4			84.2	10.0	0.0		0.0			96.5	
Queue Delay	0.0	0.1			0.0	0.0	0.0		0.0			0.0	

Lane Group	SBR
Lane Configurations	1
Traffic Volume (vph)	138
Future Volume (vph)	138
Ideal Flow (vphpl)	1900
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Fr _t	0.850
Flt Protected	
Satd. Flow (prot)	1523
Flt Permitted	
Satd. Flow (perm)	1523
Right Turn on Red	Yes
Satd. Flow (RTOR)	155
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.89
Heavy Vehicles (%)	5%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	155
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	40.0
Total Split (s)	40.0
Total Split (%)	21.1%
Maximum Green (s)	32.9
Yellow Time (s)	3.5
All-Red Time (s)	3.6
Lost Time Adjust (s)	-2.5
Total Lost Time (s)	4.6
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	5
Act Effect Green (s)	26.6
Actuated g/C Ratio	0.14
v/c Ratio	0.45
Control Delay	12.5
Queue Delay	0.0

3486 22-02730

Existing - AM
40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay	96.8	9.5			84.2	10.0	0.0		0.0			96.5
LOS	F	A			F	B	A		A			F
Approach Delay		11.7				9.9						52.1
Approach LOS		B				A						D
Queue Length 50th (ft)	62	257			6	168	0		0			167
Queue Length 95th (ft)	101	813			23	239	0		0			238
Internal Link Dist (ft)		107				318			120			293
Turn Bay Length (ft)	400				80		240					
Base Capacity (vph)	182	3938			150	3474	1523		257			259
Starvation Cap Reductn	0	558			0	0	0		0			0
Spillback Cap Reductn	0	0			0	0	0		0			0
Storage Cap Reductn	0	0			0	0	0		0			0
Reduced v/c Ratio	0.28	0.61			0.03	0.31	0.03		0.01			0.53

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 190

Offset: 171 (90%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.4

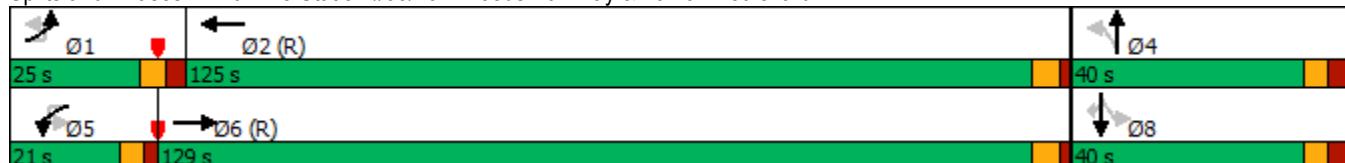
Intersection LOS: B

Intersection Capacity Utilization 54.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard





Lane Group	SBR
Total Delay	12.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	67
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	409
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.38
Intersection Summary	

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	118	1280	1	2	1	1703	121	0	1	0	88	0
Future Volume (veh/h)	118	1280	1	2	1	1703	121	0	1	0	88	0
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1900		394	1832	1876	1876	394	1876	1847	1876
Adj Flow Rate, veh/h	127	1376	1		1	1831	0	0	1	0	95	0
Peak Hour Factor	0.93	0.93	0.93		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	0		100	3	0	0	100	0	2	0
Cap, veh/h	156	4431	3		4	3833		0	35	0	156	0
Arrive On Green	0.17	1.00	1.00		0.01	0.77	0.00	0.00	0.09	0.00	0.09	0.00
Sat Flow, veh/h	1795	5228	4		376	5001	1590	0	394	0	1384	0
Grp Volume(v), veh/h	127	889	488		1	1831	0	0	1	0	95	0
Grp Sat Flow(s), veh/h/ln	1795	1689	1855		376	1667	1590	0	394	0	1384	0
Q Serve(g_s), s	15.0	0.0	0.0		0.6	29.7	0.0	0.0	0.5	0.0	14.4	0.0
Cycle Q Clear(g_c), s	15.0	0.0	0.0		0.6	29.7	0.0	0.0	0.5	0.0	14.9	0.0
Prop In Lane	1.00		0.00		1.00		1.00	0.00		0.00	1.00	
Lane Grp Cap(c), veh/h	156	2862	1572		4	3833		0	35	0	156	0
V/C Ratio(X)	0.81	0.31	0.31		0.26	0.48		0.00	0.03	0.00	0.61	0.00
Avail Cap(c_a), veh/h	208	2862	1572		37	3833		0	60	0	245	0
HCM Platoon Ratio	2.00	2.00	2.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	89.1	0.0	0.0		108.0	9.5	0.0	0.0	91.5	0.0	98.4	0.0
Incr Delay (d2), s/veh	16.3	0.3	0.5		31.1	0.4	0.0	0.0	0.3	0.0	3.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	11.7	0.2	0.4		0.2	16.3	0.0	0.0	0.1	0.0	9.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	105.5	0.3	0.5		139.1	9.9	0.0	0.0	91.9	0.0	102.2	0.0
LnGrp LOS	F	A	A		F	A		A	F	A	F	A
Approach Vol, veh/h		1504				1832			1			95
Approach Delay, s/veh		9.2				10.0			91.9			102.2
Approach LOS		A				A			F			F
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.6	172.2		24.2	5.8	190.1		24.2				
Change Period (Y+Rc), s	6.5	5.6		7.1	5.5	5.6		7.1				
Max Green Setting (Gmax), s	23.5	146.4		30.9	19.5	151.4		30.9				
Max Q Clear Time (g_c+l1), s	17.0	31.7		2.5	2.6	2.0		16.9				
Green Ext Time (p_c), s	0.2	25.8		0.0	0.0	15.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	104
Future Volume (veh/h)	104
Initial Q (Q _b), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/in	1832
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.93
Percent Heavy Veh, %	3
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1553
Grp Volume(v), veh/h	0
Grp Sat Flow(s), veh/h/in	1553
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(95%), veh/in	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group												
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	118	1280	1	2	1	1703	121	0	1	0	88	0
Future Volume (vph)	118	1280	1	2	1	1703	121	0	1	0	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%				2%			2%			2%
Storage Length (ft)	400		0		80		240	0		0	0	
Storage Lanes	1		0		1		1	0		0	0	
Taper Length (ft)	100				25			25			25	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t							0.850					
Flt Protected		0.950				0.950						0.950
Satd. Flow (prot)	1787	5036	0	0	1340	4986	1599	0	940	0	0	1752
Flt Permitted		0.950				0.784						0.757
Satd. Flow (perm)	1787	5036	0	0	1106	4986	1599	0	940	0	0	1396
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)							75					
Link Speed (mph)		35				35			25			25
Link Distance (ft)		187				398			200			373
Travel Time (s)		3.6				7.8			5.5			10.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	3%	0%	0%	100%	3%	0%	0%	100%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	1377	0	0	3	1831	130	0	1	0	0	95
Turn Type	Prot	NA	custom	Prot	NA	Free			NA	Perm	NA	
Protected Phases	1	6			5	2			4			8
Permitted Phases			5			Free	4			8		
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		10.0	10.0		5.0	5.0
Minimum Split (s)	11.5	10.6		10.5	10.5	51.6		17.1	17.1		40.0	40.0
Total Split (s)	30.0	157.0		25.0	25.0	152.0		38.0	38.0		38.0	38.0
Total Split (%)	13.6%	71.4%		11.4%	11.4%	69.1%		17.3%	17.3%		17.3%	17.3%
Maximum Green (s)	23.5	151.4		19.5	19.5	146.4		30.9	30.9		30.9	30.9
Yellow Time (s)	3.5	4.1		3.5	3.5	4.1		3.5	3.5		3.5	3.5
All-Red Time (s)	3.0	1.5		2.0	2.0	1.5		3.6	3.6		3.6	3.6
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.5			-2.5	
Total Lost Time (s)	4.5	3.6			3.5	3.6		4.6			4.6	
Lead/Lag	Lead	Lag		Lead	Lead	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	3.0	4.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)							8.0				7.0	7.0
Flash Dont Walk (s)							33.0				23.0	23.0
Pedestrian Calls (#/hr)						5				5	5	
Act Effct Green (s)	22.3	184.4			11.2	161.8	220.0		23.2			23.2
Actuated g/C Ratio	0.10	0.84			0.05	0.74	1.00		0.11			0.11
v/c Ratio	0.71	0.33			0.05	0.50	0.08		0.01			0.65
Control Delay	106.6	7.4			98.0	13.6	0.1		83.0			113.2
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0			0.0

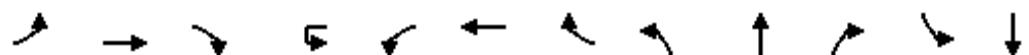


Lane Group	SBR
Lane Configurations	1
Traffic Volume (vph)	104
Future Volume (vph)	104
Ideal Flow (vphpl)	1900
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1552
Flt Permitted	
Satd. Flow (perm)	1552
Right Turn on Red	Yes
Satd. Flow (RTOR)	112
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.93
Heavy Vehicles (%)	3%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	112
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	40.0
Total Split (s)	38.0
Total Split (%)	17.3%
Maximum Green (s)	30.9
Yellow Time (s)	3.5
All-Red Time (s)	3.6
Lost Time Adjust (s)	-2.5
Total Lost Time (s)	4.6
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	5
Act Effect Green (s)	23.2
Actuated g/C Ratio	0.11
v/c Ratio	0.43
Control Delay	16.5
Queue Delay	0.0

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Existing - PM

40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay	106.6	7.4			98.0	13.6	0.1		83.0			113.2
LOS	F	A			F	B	A		F			F
Approach Delay		15.8				12.8			83.0			60.9
Approach LOS		B				B			F			E
Queue Length 50th (ft)	181	121			4	387	0		1			135
Queue Length 95th (ft)	247	549			19	514	0		9			202
Internal Link Dist (ft)		107				318			120			293
Turn Bay Length (ft)	400				80		240					
Base Capacity (vph)	209	4221			108	3667	1599		142			211
Starvation Cap Reductn	0	0			0	0	0		0			0
Spillback Cap Reductn	0	0			0	0	0		0			0
Storage Cap Reductn	0	0			0	0	0		0			0
Reduced v/c Ratio	0.61	0.33			0.03	0.50	0.08		0.01			0.45

Intersection Summary

Area Type: Other

Cycle Length: 220

Actuated Cycle Length: 220

Offset: 171 (78%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 16.7

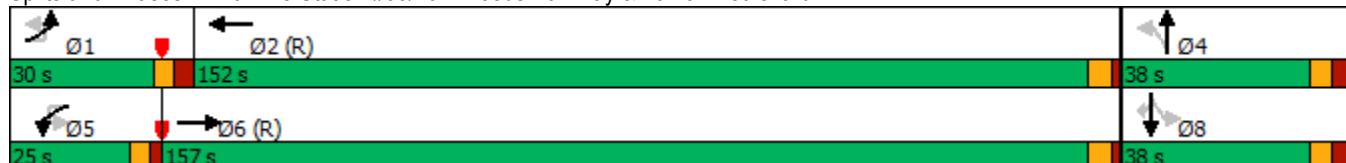
Intersection LOS: B

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard





Lane Group	SBR
Total Delay	16.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	68
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	330
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.34
Intersection Summary	

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	46	1936	0	4	1	1036	45	2	0	1	125	0
Future Volume (veh/h)	46	1936	0	4	1	1036	45	2	0	1	125	0
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1796	1826	1900		1876	1743	1802	1135	1876	1862	1847	1876
Adj Flow Rate, veh/h	52	2175	0		1	1164	0	2	0	1	140	0
Peak Hour Factor	0.89	0.89	0.89		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	5	0		0	9	5	50	0	1	2	0
Cap, veh/h	82	4016	0		21	3636		166	6	70	210	0
Arrive On Green	0.10	1.00	0.00		0.01	0.76	0.00	0.12	0.00	0.11	0.12	0.00
Sat Flow, veh/h	1711	5149	0		1787	4759	1527	1110	51	581	1425	0
Grp Volume(v), veh/h	52	2175	0		1	1164	0	3	0	0	140	0
Grp Sat Flow(s), veh/h/ln	1711	1662	0		1787	1586	1527	1743	0	0	1425	0
Q Serve(g_s), s	5.6	0.0	0.0		0.1	14.5	0.0	0.0	0.0	0.0	17.9	0.0
Cycle Q Clear(g_c), s	5.6	0.0	0.0		0.1	14.5	0.0	0.3	0.0	0.0	18.2	0.0
Prop In Lane	1.00		0.00		1.00		1.00	0.67		0.33	1.00	
Lane Grp Cap(c), veh/h	82	4016	0		21	3636		242	0	0	210	0
V/C Ratio(X)	0.63	0.54	0.00		0.05	0.32		0.01	0.00	0.00	0.67	0.00
Avail Cap(c_a), veh/h	185	4016	0		165	3636		339	0	0	303	0
HCM Platoon Ratio	2.00	2.00	2.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00		1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	84.2	0.0	0.0		92.8	7.0	0.0	73.9	0.0	0.0	81.4	0.0
Incr Delay (d2), s/veh	7.8	0.5	0.0		0.9	0.2	0.0	0.0	0.0	0.0	3.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	4.6	0.4	0.0		0.1	8.5	0.0	0.2	0.0	0.0	11.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.0	0.5	0.0		93.7	7.2	0.0	73.9	0.0	0.0	85.0	0.0
LnGrp LOS	F	A	A		F	A		E	A	A	F	A
Approach Vol, veh/h	2227				1165			3			140	
Approach Delay, s/veh	2.7				7.3			73.9			85.0	
Approach LOS	A				A			E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	148.8		27.6	5.8	156.7		27.6				
Change Period (Y+Rc), s	6.5	5.6		7.1	5.5	5.6		7.1				
Max Green Setting (Gmax), s	18.5	119.4		32.9	15.5	123.4		32.9				
Max Q Clear Time (g_c+l1), s	7.6	16.5		2.3	2.1	2.0		20.2				
Green Ext Time (p_c), s	0.1	10.9		0.0	0.0	48.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			7.5									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	141
Future Volume (veh/h)	141
Initial Q (Q _b), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/in	1802
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.89
Percent Heavy Veh, %	5
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1527
Grp Volume(v), veh/h	0
Grp Sat Flow(s), veh/h/in	1527
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(95%), veh/in	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

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No Build - AM
40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard

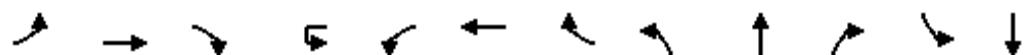
	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	46	1936		0	4	1	1036	45	2	0	1	125
Future Volume (vph)	46	1936		0	4	1	1036	45	2	0	1	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%					2%			2%		2%
Storage Length (ft)	400		0		80		240	0		0	0	
Storage Lanes	1		0		1		1	0		0	0	
Taper Length (ft)	100				25			25			25	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t							0.850			0.955		
Flt Protected	0.950				0.950					0.968		0.950
Satd. Flow (prot)	1687	4940	0	0	1787	4711	1523	0	1301	0	0	1752
Flt Permitted	0.950				0.870				0.876			0.756
Satd. Flow (perm)	1687	4940	0	0	1636	4711	1523	0	1177	0	0	1394
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)							87			47		
Link Speed (mph)		35				35			25			25
Link Distance (ft)		187				398			200			373
Travel Time (s)		3.6				7.8			5.5			10.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	7%	5%	0%	0%	0%	9%	5%	50%	0%	1%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	2175	0	0	5	1164	51	0	3	0	0	140
Turn Type	Prot	NA		custom	Prot	NA	Free	Perm	NA		Perm	NA
Protected Phases	1	6			5	2			4			8
Permitted Phases				5			Free	4			8	
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		10.0	10.0		5.0	5.0
Minimum Split (s)	11.5	10.6		10.5	10.5	51.6		17.1	17.1		40.0	40.0
Total Split (s)	25.0	129.0		21.0	21.0	125.0		40.0	40.0		40.0	40.0
Total Split (%)	13.2%	67.9%		11.1%	11.1%	65.8%		21.1%	21.1%		21.1%	21.1%
Maximum Green (s)	18.5	123.4		15.5	15.5	119.4		32.9	32.9		32.9	32.9
Yellow Time (s)	3.5	4.1		3.5	3.5	4.1		3.5	3.5		3.5	3.5
All-Red Time (s)	3.0	1.5		2.0	2.0	1.5		3.6	3.6		3.6	3.6
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.5			-2.5	
Total Lost Time (s)	4.5	3.6		3.5	3.6			4.6			4.6	
Lead/Lag	Lead	Lag		Lead	Lead	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	3.0	4.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)							8.0				7.0	7.0
Flash Dont Walk (s)							33.0				23.0	23.0
Pedestrian Calls (#/hr)						5				5	5	
Act Effct Green (s)	13.3	151.3		10.3	139.8	190.0		26.8				26.8
Actuated g/C Ratio	0.07	0.80		0.05	0.74	1.00		0.14				0.14
v/c Ratio	0.44	0.55		0.06	0.34	0.03		0.01				0.71
Control Delay	100.7	8.5		84.2	10.4	0.0		0.0				96.8
Queue Delay	0.0	0.1		0.0	0.0	0.0		0.0				0.0

Lane Group	SBR
Lane Configurations	1
Traffic Volume (vph)	141
Future Volume (vph)	141
Ideal Flow (vphpl)	1900
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Fr _t	0.850
Flt Protected	
Satd. Flow (prot)	1523
Flt Permitted	
Satd. Flow (perm)	1523
Right Turn on Red	Yes
Satd. Flow (RTOR)	158
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.89
Heavy Vehicles (%)	5%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	158
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	40.0
Total Split (s)	40.0
Total Split (%)	21.1%
Maximum Green (s)	32.9
Yellow Time (s)	3.5
All-Red Time (s)	3.6
Lost Time Adjust (s)	-2.5
Total Lost Time (s)	4.6
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	5
Act Effect Green (s)	26.8
Actuated g/C Ratio	0.14
v/c Ratio	0.45
Control Delay	12.5
Queue Delay	0.0

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No Build - AM

40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay	100.7	8.6			84.2	10.4	0.0		0.0			96.8
LOS	F	A			F	B	A		A			F
Approach Delay		10.7				10.2						52.1
Approach LOS		B				B						D
Queue Length 50th (ft)	64	287			6	184	0		0			170
Queue Length 95th (ft)	104	780			23	260	0		0			241
Internal Link Dist (ft)		107				318			120			293
Turn Bay Length (ft)	400				80		240					
Base Capacity (vph)	182	3933			150	3467	1523		257			259
Starvation Cap Reductn	0	394			0	0	0		0			0
Spillback Cap Reductn	0	0			0	0	0		0			0
Storage Cap Reductn	0	0			0	0	0		0			0
Reduced v/c Ratio	0.29	0.61			0.03	0.34	0.03		0.01			0.54

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 190

Offset: 171 (90%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 13.8

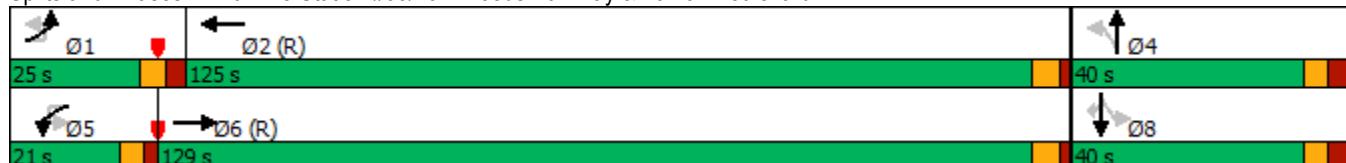
Intersection LOS: B

Intersection Capacity Utilization 56.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard





Lane Group	SBR
Total Delay	12.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	68
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	412
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.38
Intersection Summary	

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No Build - PM
40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	120	1364	1	2	1	1812	124	0	1	0	90	0
Future Volume (veh/h)	120	1364	1	2	1	1812	124	0	1	0	90	0
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1900		394	1832	1876	1876	394	1876	1847	1876
Adj Flow Rate, veh/h	129	1467	1		1	1948	0	0	1	0	97	0
Peak Hour Factor	0.93	0.93	0.93		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	0		100	3	0	0	100	0	2	0
Cap, veh/h	158	4424	3		4	3821		0	36	0	158	0
Arrive On Green	0.18	1.00	1.00		0.01	0.76	0.00	0.00	0.09	0.00	0.09	0.00
Sat Flow, veh/h	1795	5228	4		376	5001	1590	0	394	0	1384	0
Grp Volume(v), veh/h	129	948	520		1	1948	0	0	1	0	97	0
Grp Sat Flow(s), veh/h/ln	1795	1689	1855		376	1667	1590	0	394	0	1384	0
Q Serve(g_s), s	15.2	0.0	0.0		0.6	33.1	0.0	0.0	0.5	0.0	14.7	0.0
Cycle Q Clear(g_c), s	15.2	0.0	0.0		0.6	33.1	0.0	0.0	0.5	0.0	15.2	0.0
Prop In Lane	1.00		0.00		1.00		1.00	0.00		0.00	1.00	
Lane Grp Cap(c), veh/h	158	2857	1569		4	3821		0	36	0	158	0
V/C Ratio(X)	0.82	0.33	0.33		0.26	0.51		0.00	0.03	0.00	0.62	0.00
Avail Cap(c_a), veh/h	208	2857	1569		37	3821		0	60	0	245	0
HCM Platoon Ratio	2.00	2.00	2.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	88.9	0.0	0.0		108.0	10.0	0.0	0.0	91.3	0.0	98.2	0.0
Incr Delay (d2), s/veh	16.9	0.3	0.6		31.1	0.5	0.0	0.0	0.3	0.0	3.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	11.9	0.2	0.4		0.2	18.0	0.0	0.0	0.1	0.0	9.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	105.9	0.3	0.6		139.1	10.5	0.0	0.0	91.6	0.0	102.1	0.0
LnGrp LOS	F	A	A		F	B		A	F	A	F	A
Approach Vol, veh/h		1597				1949			1			97
Approach Delay, s/veh		8.9				10.6			91.6			102.1
Approach LOS		A				B			F			F
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.9	171.7		24.5	5.8	189.7		24.5				
Change Period (Y+Rc), s	6.5	5.6		7.1	5.5	5.6		7.1				
Max Green Setting (Gmax), s	23.5	146.4		30.9	19.5	151.4		30.9				
Max Q Clear Time (g_c+l1), s	17.2	35.1		2.5	2.6	2.0		17.2				
Green Ext Time (p_c), s	0.2	29.8		0.0	0.0	17.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	106
Future Volume (veh/h)	106
Initial Q (Q _b), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/in	1832
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.93
Percent Heavy Veh, %	3
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1553
Grp Volume(v), veh/h	0
Grp Sat Flow(s), veh/h/in	1553
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(95%), veh/in	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

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No Build - PM
40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard

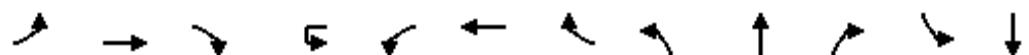
	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT							
Lane Configurations																			
Traffic Volume (vph)	120	1364	1	2	1	1812	124	0	1	0	90	0							
Future Volume (vph)	120	1364	1	2	1	1812	124	0	1	0	90	0							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900							
Grade (%)	0%				2%				2%										
Storage Length (ft)	400	0			80	240			0	0	0	0							
Storage Lanes	1	0			1	1			0	0	0	0							
Taper Length (ft)	100	25				25				25									
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00							
Fr _t	0.850																		
Flt Protected	0.950																		
Satd. Flow (prot)	1787	5036	0	0	1340	4986	1599	0	940	0	0	1752							
Flt Permitted	0.950																		
Satd. Flow (perm)	1787	5036	0	0	1106	4986	1599	0	940	0	0	1396							
Right Turn on Red	Yes				Yes				Yes										
Satd. Flow (RTOR)	75																		
Link Speed (mph)	35				35				25										
Link Distance (ft)	187				398				200										
Travel Time (s)	3.6				7.8				5.5										
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93							
Heavy Vehicles (%)	1%	3%	0%	0%	100%	3%	0%	0%	100%	0%	2%	0%							
Shared Lane Traffic (%)																			
Lane Group Flow (vph)	129	1468	0	0	3	1948	133	0	1	0	0	97							
Turn Type	Prot	NA	custom		Prot	NA	Free	NA				Perm							
Protected Phases	1	6	5			2	4			8									
Permitted Phases																			
Detector Phase	1	6	5	5	2	4			4	8	8								
Switch Phase																			
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	10.0			5.0	5.0								
Minimum Split (s)	11.5	10.6	10.5		10.5	51.6	17.1			40.0	40.0								
Total Split (s)	30.0	157.0	25.0		25.0	152.0	38.0			38.0	38.0								
Total Split (%)	13.6%	71.4%	11.4%		11.4%	69.1%	17.3%			17.3%	17.3%								
Maximum Green (s)	23.5	151.4	19.5		19.5	146.4	30.9			30.9	30.9								
Yellow Time (s)	3.5	4.1	3.5		3.5	4.1	3.5			3.5	3.5								
All-Red Time (s)	3.0	1.5	2.0		2.0	1.5	3.6			3.6	3.6								
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0	-2.0	-2.5			-2.5									
Total Lost Time (s)	4.5	3.6	3.5		3.6	4.6			4.6										
Lead/Lag	Lead	Lag	Lead		Lead	Lag													
Lead-Lag Optimize?																			
Vehicle Extension (s)	3.0	4.0	3.0		3.0	4.0	3.0			3.0	3.0								
Recall Mode	None	C-Max	None		None	C-Max	None			None	None								
Walk Time (s)																			
Flash Dont Walk (s)																			
Pedestrian Calls (#/hr)																			
Act Effct Green (s)	22.4	184.1	11.2		161.4	220.0	23.5			23.5									
Actuated g/C Ratio	0.10	0.84	0.05		0.73	1.00	0.11			0.11									
v/c Ratio	0.71	0.35	0.05		0.53	0.08	0.01			0.65									
Control Delay	123.7	3.5	98.0		14.3	0.1	83.0			113.4									
Queue Delay	0.0	0.1	0.0		0.0	0.0	0.0			0.0									

Lane Group	SBR
Lane Configurations	1
Traffic Volume (vph)	106
Future Volume (vph)	106
Ideal Flow (vphpl)	1900
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Fr _t	0.850
Flt Protected	
Satd. Flow (prot)	1552
Flt Permitted	
Satd. Flow (perm)	1552
Right Turn on Red	Yes
Satd. Flow (RTOR)	114
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.93
Heavy Vehicles (%)	3%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	114
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	40.0
Total Split (s)	38.0
Total Split (%)	17.3%
Maximum Green (s)	30.9
Yellow Time (s)	3.5
All-Red Time (s)	3.6
Lost Time Adjust (s)	-2.5
Total Lost Time (s)	4.6
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	5
Act Effect Green (s)	23.5
Actuated g/C Ratio	0.11
v/c Ratio	0.43
Control Delay	16.4
Queue Delay	0.0

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No Build - PM

40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay	123.7	3.6			98.0	14.3	0.1		83.0			113.4
LOS	F	A			F	B	A		F			F
Approach Delay		13.3				13.5			83.0			61.0
Approach LOS		B				B			F			E
Queue Length 50th (ft)	184	134			4	431	0		1			138
Queue Length 95th (ft)	257	15			19	565	0		9			207
Internal Link Dist (ft)		107				318			120			293
Turn Bay Length (ft)	400				80		240					
Base Capacity (vph)	209	4215			108	3658	1599		142			211
Starvation Cap Reductn	0	1205			0	0	0		0			0
Spillback Cap Reductn	0	0			0	0	0		0			0
Storage Cap Reductn	0	0			0	0	0		0			0
Reduced v/c Ratio	0.62	0.49			0.03	0.53	0.08		0.01			0.46

Intersection Summary

Area Type: Other

Cycle Length: 220

Actuated Cycle Length: 220

Offset: 171 (78%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 16.0

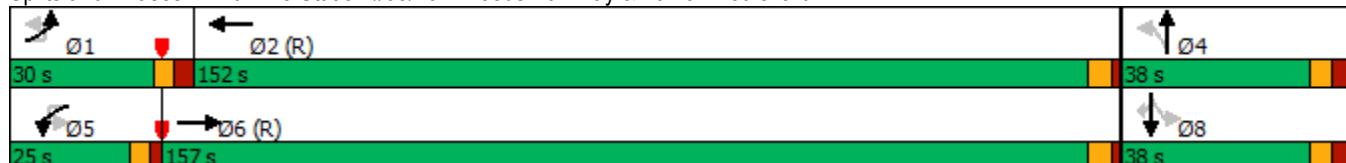
Intersection LOS: B

Intersection Capacity Utilization 71.3%

ICU Level of Service C

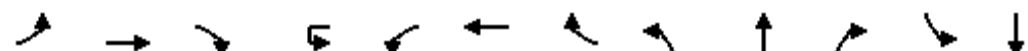
Analysis Period (min) 15

Splits and Phases: 40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard





Lane Group	SBR
Total Delay	16.4
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	70
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	332
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.34
Intersection Summary	



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	Y	↑↑↓			Y	↑↑	↑		↓			↑
Traffic Volume (veh/h)	46	1946	0	4	1	1057	45	2	0	1	135	0
Future Volume (veh/h)	46	1946	0	4	1	1057	45	2	0	1	135	0
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1796	1826	1900		1876	1743	1802	1135	1876	1862	1847	1876
Adj Flow Rate, veh/h	52	2187	0		1	1188	0	2	0	1	152	0
Peak Hour Factor	0.89	0.89	0.89		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	5	0		0	9	5	50	0	1	2	0
Cap, veh/h	82	3974	0		21	3597		176	6	75	222	0
Arrive On Green	0.10	1.00	0.00		0.01	0.76	0.00	0.13	0.00	0.12	0.13	0.00
Sat Flow, veh/h	1711	5149	0		1787	4759	1527	1117	48	582	1425	0
Grp Volume(v), veh/h	52	2187	0		1	1188	0	3	0	0	152	0
Grp Sat Flow(s), veh/h/ln	1711	1662	0		1787	1586	1527	1747	0	0	1425	0
Q Serve(g_s), s	5.6	0.0	0.0		0.1	15.4	0.0	0.0	0.0	0.0	19.5	0.0
Cycle Q Clear(g_c), s	5.6	0.0	0.0		0.1	15.4	0.0	0.3	0.0	0.0	19.7	0.0
Prop In Lane	1.00		0.00		1.00		1.00	0.67		0.33	1.00	
Lane Grp Cap(c), veh/h	82	3974	0		21	3597		257	0	0	222	0
V/C Ratio(X)	0.63	0.55	0.00		0.05	0.33		0.01	0.00	0.00	0.68	0.00
Avail Cap(c_a), veh/h	185	3974	0		165	3597		341	0	0	303	0
HCM Platoon Ratio	2.00	2.00	2.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00		1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	84.2	0.0	0.0		92.8	7.5	0.0	72.5	0.0	0.0	80.6	0.0
Incr Delay (d2), s/veh	7.8	0.6	0.0		0.9	0.2	0.0	0.0	0.0	0.0	3.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	4.6	0.4	0.0		0.1	9.0	0.0	0.2	0.0	0.0	12.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.0	0.6	0.0		93.7	7.8	0.0	72.5	0.0	0.0	84.3	0.0
LnGrp LOS	F	A	A		F	A		E	A	A	F	A
Approach Vol, veh/h	2239				1189			3			152	
Approach Delay, s/veh	2.7				7.9			72.5			84.3	
Approach LOS	A				A			E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	147.2		29.2	5.8	155.1		29.2				
Change Period (Y+Rc), s	6.5	5.6		7.1	5.5	5.6		7.1				
Max Green Setting (Gmax), s	18.5	119.4		32.9	15.5	123.4		32.9				
Max Q Clear Time (g_c+l1), s	7.6	17.4		2.3	2.1	2.0		21.7				
Green Ext Time (p_c), s	0.1	11.2		0.0	0.0	49.6		0.3				

Intersection Summary

HCM 6th Ctrl Delay 7.9
HCM 6th LOS A

Notes

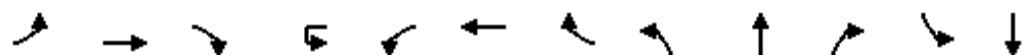
User approved ignoring U-Turning movement.

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

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	141
Future Volume (veh/h)	141
Initial Q (Q _b), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/in	1802
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.89
Percent Heavy Veh, %	5
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1527
Grp Volume(v), veh/h	0
Grp Sat Flow(s), veh/h/in	1527
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(95%), veh/in	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	46	1946		0	4	1	1057	45	2	0	1	135
Future Volume (vph)	46	1946		0	4	1	1057	45	2	0	1	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)				0%			2%			2%		2%
Storage Length (ft)	400			0		80		240	0		0	0
Storage Lanes	1			0		1		1	0		0	0
Taper Length (ft)	100					25			25			25
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t							0.850			0.955		
Flt Protected	0.950					0.950				0.968		0.950
Satd. Flow (prot)	1687	4940		0	0	1787	4711	1523	0	1301	0	0
Flt Permitted	0.950					0.870				0.876		0.756
Satd. Flow (perm)	1687	4940		0	0	1636	4711	1523	0	1177	0	0
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)							87			47		
Link Speed (mph)		35				35			25			25
Link Distance (ft)		187				398			200			373
Travel Time (s)		3.6				7.8			5.5			10.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	7%	5%	0%	0%	0%	9%	5%	50%	0%	1%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	2187	0	0	5	1188	51	0	3	0	0	152
Turn Type	Prot	NA		custom	Prot	NA	Free	Perm	NA		Perm	NA
Protected Phases	1	6			5	2			4			8
Permitted Phases				5			Free	4			8	
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		10.0	10.0		5.0	5.0
Minimum Split (s)	11.5	10.6		10.5	10.5	51.6		17.1	17.1		40.0	40.0
Total Split (s)	25.0	129.0		21.0	21.0	125.0		40.0	40.0		40.0	40.0
Total Split (%)	13.2%	67.9%		11.1%	11.1%	65.8%		21.1%	21.1%		21.1%	21.1%
Maximum Green (s)	18.5	123.4		15.5	15.5	119.4		32.9	32.9		32.9	32.9
Yellow Time (s)	3.5	4.1		3.5	3.5	4.1		3.5	3.5		3.5	3.5
All-Red Time (s)	3.0	1.5		2.0	2.0	1.5		3.6	3.6		3.6	3.6
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.5			-2.5	
Total Lost Time (s)	4.5	3.6			3.5	3.6		4.6				4.6
Lead/Lag	Lead	Lag		Lead	Lead	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	3.0	4.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)							8.0				7.0	7.0
Flash Dont Walk (s)							33.0				23.0	23.0
Pedestrian Calls (#/hr)						5				5	5	
Act Effct Green (s)	13.3	150.1			10.3	138.6	190.0		28.0			28.0
Actuated g/C Ratio	0.07	0.79			0.05	0.73	1.00		0.15			0.15
v/c Ratio	0.44	0.56			0.06	0.35	0.03		0.01			0.74
Control Delay	100.4	9.4			84.2	10.9	0.0		0.0			98.0
Queue Delay	0.0	0.1			0.0	0.0	0.0		0.0			0.0

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	141
Future Volume (vph)	141
Ideal Flow (vphpl)	1900
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Fr _t	0.850
Flt Protected	
Satd. Flow (prot)	1523
Flt Permitted	
Satd. Flow (perm)	1523
Right Turn on Red	Yes
Satd. Flow (RTOR)	158
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.89
Heavy Vehicles (%)	5%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	158
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	40.0
Total Split (s)	40.0
Total Split (%)	21.1%
Maximum Green (s)	32.9
Yellow Time (s)	3.5
All-Red Time (s)	3.6
Lost Time Adjust (s)	-2.5
Total Lost Time (s)	4.6
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	5
Act Effect Green (s)	28.0
Actuated g/C Ratio	0.15
v/c Ratio	0.44
Control Delay	12.2
Queue Delay	0.0



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay	100.4	9.6			84.2	10.9	0.0		0.0			98.0
LOS	F	A			F	B	A		A			F
Approach Delay		11.7				10.7						54.3
Approach LOS		B				B						D
Queue Length 50th (ft)	64	307			6	195	0		0			184
Queue Length 95th (ft)	105	787			23	267	0		0			261
Internal Link Dist (ft)		107				318			120			293
Turn Bay Length (ft)	400				80		240					
Base Capacity (vph)	182	3902			150	3437	1523		257			259
Starvation Cap Reductn	0	567			0	0	0		0			0
Spillback Cap Reductn	0	0			0	0	0		0			0
Storage Cap Reductn	0	0			0	0	0		0			0
Reduced v/c Ratio	0.29	0.66			0.03	0.35	0.03		0.01			0.59

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 190

Offset: 171 (90%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 14.8

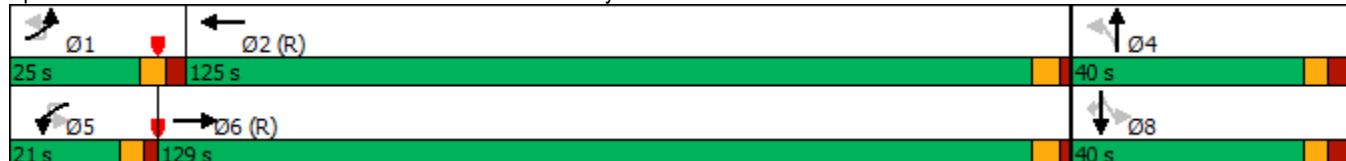
Intersection LOS: B

Intersection Capacity Utilization 56.4%

ICU Level of Service B

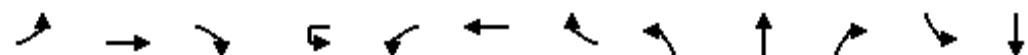
Analysis Period (min) 15

Splits and Phases: 40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard





Lane Group	SBR
Total Delay	12.2
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	68
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	412
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.38
<hr/> Intersection Summary	



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	Y	↑↑↓			Y	↑↑	↑		♣			↑
Traffic Volume (veh/h)	120	1371	1	2	1	1827	124	0	1	0	97	0
Future Volume (veh/h)	120	1371	1	2	1	1827	124	0	1	0	97	0
Initial Q (Q _b), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1900		394	1832	1876	1876	394	1876	1847	1876
Adj Flow Rate, veh/h	129	1474	1		1	1965	0	0	1	0	104	0
Peak Hour Factor	0.93	0.93	0.93		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	0		100	3	0	0	100	0	2	0
Cap, veh/h	158	4398	3		4	3796		0	38	0	165	0
Arrive On Green	0.18	1.00	1.00		0.01	0.76	0.00	0.00	0.10	0.00	0.10	0.00
Sat Flow, veh/h	1795	5228	4		376	5001	1590	0	394	0	1387	0
Grp Volume(v), veh/h	129	952	523		1	1965	0	0	1	0	104	0
Grp Sat Flow(s), veh/h/ln	1795	1689	1855		376	1667	1590	0	394	0	1387	0
Q Serve(g_s), s	15.2	0.0	0.0		0.6	34.3	0.0	0.0	0.5	0.0	15.8	0.0
Cycle Q Clear(g_c), s	15.2	0.0	0.0		0.6	34.3	0.0	0.0	0.5	0.0	16.3	0.0
Prop In Lane	1.00		0.00		1.00		1.00	0.00		0.00	1.00	
Lane Grp Cap(c), veh/h	158	2841	1560		4	3796		0	38	0	165	0
V/C Ratio(X)	0.82	0.34	0.34		0.26	0.52		0.00	0.03	0.00	0.63	0.00
Avail Cap(c_a), veh/h	208	2841	1560		37	3796		0	60	0	245	0
HCM Platoon Ratio	2.00	2.00	2.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00		1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	88.9	0.0	0.0		108.0	10.5	0.0	0.0	90.3	0.0	97.7	0.0
Incr Delay (d2), s/veh	16.9	0.3	0.6		31.1	0.5	0.0	0.0	0.3	0.0	4.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	11.9	0.2	0.5		0.2	18.6	0.0	0.0	0.1	0.0	10.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	105.9	0.3	0.6		139.1	11.0	0.0	0.0	90.6	0.0	101.6	0.0
LnGrp LOS	F	A	A		F	B		A	F	A	F	A
Approach Vol, veh/h	1604				1966				1		104	
Approach Delay, s/veh	8.9				11.1				90.6		101.6	
Approach LOS	A				B				F		F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.9	170.6		25.5	5.8	188.7		25.5				
Change Period (Y+Rc), s	6.5	5.6		7.1	5.5	5.6		7.1				
Max Green Setting (Gmax), s	23.5	146.4		30.9	19.5	151.4		30.9				
Max Q Clear Time (g_c+l1), s	17.2	36.3		2.5	2.6	2.0		18.3				
Green Ext Time (p_c), s	0.2	30.4		0.0	0.0	18.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay 12.7

HCM 6th LOS B

Notes

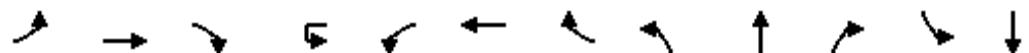
User approved ignoring U-Turning movement.

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

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	106
Future Volume (veh/h)	106
Initial Q (Q _b), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/in	1832
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.93
Percent Heavy Veh, %	3
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1553
Grp Volume(v), veh/h	0
Grp Sat Flow(s), veh/h/in	1553
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(95%), veh/in	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1	1	1	1	0	0	0
Traffic Volume (vph)	120	1371	1	2	1	1827	124	0	1	0	97	0
Future Volume (vph)	120	1371	1	2	1	1827	124	0	1	0	97	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)	0%					2%			2%			2%
Storage Length (ft)	400		0		80		240	0		0	0	
Storage Lanes	1		0		1		1	0		0	0	
Taper Length (ft)	100				25			25			25	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t							0.850					
Flt Protected	0.950					0.950						0.950
Satd. Flow (prot)	1787	5036	0	0	1340	4986	1599	0	940	0	0	1752
Flt Permitted	0.950					0.784						0.757
Satd. Flow (perm)	1787	5036	0	0	1106	4986	1599	0	940	0	0	1396
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)							75					
Link Speed (mph)	35					35			25			25
Link Distance (ft)	187					398			200			373
Travel Time (s)	3.6					7.8			5.5			10.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	3%	0%	0%	100%	3%	0%	0%	100%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	1475	0	0	3	1965	133	0	1	0	0	104
Turn Type	Prot	NA	custom		Prot	NA	Free		NA		Perm	NA
Protected Phases	1	6			5	2			4			8
Permitted Phases				5			Free	4			8	
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		10.0	10.0		5.0	5.0
Minimum Split (s)	11.5	10.6		10.5	10.5	51.6		17.1	17.1		40.0	40.0
Total Split (s)	30.0	157.0		25.0	25.0	152.0		38.0	38.0		38.0	38.0
Total Split (%)	13.6%	71.4%		11.4%	11.4%	69.1%		17.3%	17.3%		17.3%	17.3%
Maximum Green (s)	23.5	151.4		19.5	19.5	146.4		30.9	30.9		30.9	30.9
Yellow Time (s)	3.5	4.1		3.5	3.5	4.1		3.5	3.5		3.5	3.5
All-Red Time (s)	3.0	1.5		2.0	2.0	1.5		3.6	3.6		3.6	3.6
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.5			-2.5	
Total Lost Time (s)	4.5	3.6		3.5	3.6			4.6			4.6	
Lead/Lag	Lead	Lag		Lead	Lead	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	3.0	4.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)							8.0				7.0	7.0
Flash Dont Walk (s)							33.0				23.0	23.0
Pedestrian Calls (#/hr)						5					5	5
Act Effct Green (s)	22.4	183.3		11.2	160.6	220.0		24.3				24.3
Actuated g/C Ratio	0.10	0.83		0.05	0.73	1.00		0.11				0.11
v/c Ratio	0.71	0.35		0.05	0.54	0.08		0.01				0.68
Control Delay	123.3	5.6		98.0	14.8	0.1		82.0				114.6
Queue Delay	0.0	0.1		0.0	0.0	0.0		0.0				0.0

Lane Group	SBR
Lane Configurations	1
Traffic Volume (vph)	106
Future Volume (vph)	106
Ideal Flow (vphpl)	1900
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Fr _t	0.850
Flt Protected	
Satd. Flow (prot)	1552
Flt Permitted	
Satd. Flow (perm)	1552
Right Turn on Red	Yes
Satd. Flow (RTOR)	114
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.93
Heavy Vehicles (%)	3%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	114
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	40.0
Total Split (s)	38.0
Total Split (%)	17.3%
Maximum Green (s)	30.9
Yellow Time (s)	3.5
All-Red Time (s)	3.6
Lost Time Adjust (s)	-2.5
Total Lost Time (s)	4.6
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	5
Act Effect Green (s)	24.3
Actuated g/C Ratio	0.11
v/c Ratio	0.42
Control Delay	16.2
Queue Delay	0.0



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay	123.3	5.7			98.0	14.8	0.1		82.0			114.6
LOS	F	A			F	B	A		F			F
Approach Delay		15.2				14.0			82.0			63.1
Approach LOS		B				B			F			E
Queue Length 50th (ft)	185	186			4	447	0		1			148
Queue Length 95th (ft)	254	15			19	573	0		9			220
Internal Link Dist (ft)		107				318			120			293
Turn Bay Length (ft)	400				80		240					
Base Capacity (vph)	209	4197			108	3640	1599		142			211
Starvation Cap Reductn	0	1181			0	0	0		0			0
Spillback Cap Reductn	0	0			0	0	0		0			0
Storage Cap Reductn	0	0			0	0	0		0			0
Reduced v/c Ratio	0.62	0.49			0.03	0.54	0.08		0.01			0.49

Intersection Summary

Area Type: Other

Cycle Length: 220

Actuated Cycle Length: 220

Offset: 171 (78%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 17.2

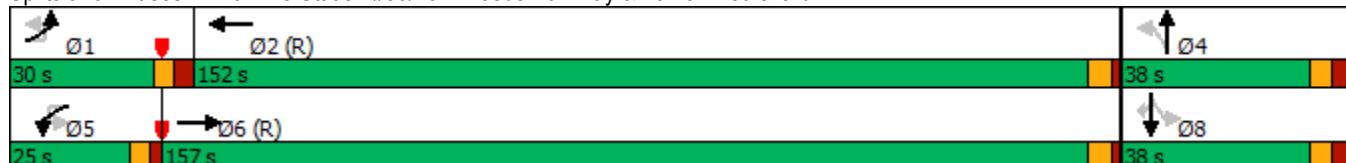
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 40: Fire Station #33/Fair Woods Parkway & Fairfax Boulevard





Lane Group	SBR
Total Delay	16.2
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	70
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	332
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.34
<hr/> Intersection Summary	

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	5	4	0	0	12	74	3	2	252	4
Future Vol, veh/h	0	0	5	4	0	0	12	74	3	2	252	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	-4	-	-	-2	-	-	4	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	0	3	0
Mvmt Flow	0	0	5	4	0	0	13	81	3	2	277	4

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	392	393	279	395	394	83	281	0	0	84	0	0
Stage 1	283	283	-	109	109	-	-	-	-	-	-	-
Stage 2	109	110	-	286	285	-	-	-	-	-	-	-
Critical Hdwy	5.9	5.3	5.6	6.3	5.7	5.8	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	651	623	801	621	596	991	1293	-	-	1526	-	-
Stage 1	800	748	-	923	829	-	-	-	-	-	-	-
Stage 2	935	838	-	773	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	644	615	801	610	588	991	1293	-	-	1526	-	-
Mov Cap-2 Maneuver	644	615	-	610	588	-	-	-	-	-	-	-
Stage 1	791	747	-	913	820	-	-	-	-	-	-	-
Stage 2	925	829	-	766	723	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	9.5	10.9			1.1			0.1		
HCM LOS	A	B								
<hr/>										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	1293	-	-	801	610	1526	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.007	0.007	0.001	-	-		
HCM Control Delay (s)	7.8	0	-	9.5	10.9	7.4	0	-		
HCM Lane LOS	A	A	-	A	B	A	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-		

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	2	16	28	0	8	12	203	25	8	148	6
Future Vol, veh/h	8	2	16	28	0	8	12	203	25	8	148	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	-4	-	-	-2	-	-	4	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	0	0	6	0	0	0	8	1	0	0	2	0
Mvmt Flow	8	2	16	28	0	8	12	205	25	8	149	6

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	414	422	152	419	413	218	155	0	0	230	0	0
Stage 1	168	168	-	242	242	-	-	-	-	-	-	-
Stage 2	246	254	-	177	171	-	-	-	-	-	-	-
Critical Hdwy	5.9	5.3	5.66	6.3	5.7	5.8	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.354	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	634	606	906	602	584	847	1389	-	-	1350	-	-
Stage 1	887	807	-	808	748	-	-	-	-	-	-	-
Stage 2	827	763	-	863	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	620	596	906	583	575	847	1389	-	-	1350	-	-
Mov Cap-2 Maneuver	620	596	-	583	575	-	-	-	-	-	-	-
Stage 1	878	802	-	800	741	-	-	-	-	-	-	-
Stage 2	811	755	-	840	785	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	9.9	11.1			0.4			0.4		
HCM LOS	A	B								
<hr/>										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	1389	-	-	767	626	1350	-	-		
HCM Lane V/C Ratio	0.009	-	-	0.034	0.058	0.006	-	-		
HCM Control Delay (s)	7.6	0	-	9.9	11.1	7.7	0	-		
HCM Lane LOS	A	A	-	A	B	A	A	-		
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-		

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	5	4	0	0	12	76	3	2	257	4
Future Vol, veh/h	0	0	5	4	0	0	12	76	3	2	257	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	-4	-	-	-2	-	-	4	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	0	3	0
Mvmt Flow	0	0	5	4	0	0	13	84	3	2	282	4

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	400	401	284	403	402	86	286	0	0	87	0	0
Stage 1	288	288	-	112	112	-	-	-	-	-	-	-
Stage 2	112	113	-	291	290	-	-	-	-	-	-	-
Critical Hdwy	5.9	5.3	5.6	6.3	5.7	5.8	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	645	618	797	614	590	988	1288	-	-	1522	-	-
Stage 1	797	746	-	921	827	-	-	-	-	-	-	-
Stage 2	932	837	-	769	721	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	639	610	797	604	582	988	1288	-	-	1522	-	-
Mov Cap-2 Maneuver	639	610	-	604	582	-	-	-	-	-	-	-
Stage 1	788	745	-	911	818	-	-	-	-	-	-	-
Stage 2	922	828	-	762	720	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	9.5	11			1			0.1		
HCM LOS	A	B								
Minor Lane/Major Mvmt										
Capacity (veh/h)	1288	-	-	797	604	1522	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.007	0.007	0.001	-	-		
HCM Control Delay (s)	7.8	0	-	9.5	11	7.4	0	-		
HCM Lane LOS	A	A	-	A	B	A	A	-		
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-		

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	2	16	29	0	8	12	207	26	8	151	6
Future Vol, veh/h	8	2	16	29	0	8	12	207	26	8	151	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	-4	-	-	-2	-	-	4	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	0	0	6	0	0	0	8	1	0	0	2	0
Mvmt Flow	8	2	16	29	0	8	12	209	26	8	153	6

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	422	431	156	427	421	222	159	0	0	235	0	0
Stage 1	172	172	-	246	246	-	-	-	-	-	-	-
Stage 2	250	259	-	181	175	-	-	-	-	-	-	-
Critical Hdwy	5.9	5.3	5.66	6.3	5.7	5.8	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.354	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	628	601	902	595	579	843	1385	-	-	1344	-	-
Stage 1	884	805	-	805	746	-	-	-	-	-	-	-
Stage 2	824	760	-	859	788	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	614	591	902	575	569	843	1385	-	-	1344	-	-
Mov Cap-2 Maneuver	614	591	-	575	569	-	-	-	-	-	-	-
Stage 1	875	799	-	797	739	-	-	-	-	-	-	-
Stage 2	808	752	-	836	782	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	9.9	11.2			0.4			0.4		
HCM LOS	A	B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1385	-	-	761	617	1344	-	-
HCM Lane V/C Ratio	0.009	-	-	0.035	0.061	0.006	-	-
HCM Control Delay (s)	7.6	0	-	9.9	11.2	7.7	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	15	4	0	0	12	76	3	2	257	9
Future Vol, veh/h	5	0	15	4	0	0	12	76	3	2	257	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	-4	-	-	-2	-	-	4	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	0	3	0
Mvmt Flow	5	0	16	4	0	0	13	84	3	2	282	10

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	403	404	287	411	408	86	292	0	0	87	0	0
Stage 1	291	291	-	112	112	-	-	-	-	-	-	-
Stage 2	112	113	-	299	296	-	-	-	-	-	-	-
Critical Hdwy	5.9	5.3	5.6	6.3	5.7	5.8	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	642	616	794	608	587	988	1281	-	-	1522	-	-
Stage 1	795	744	-	921	827	-	-	-	-	-	-	-
Stage 2	932	837	-	763	718	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	636	608	794	590	579	988	1281	-	-	1522	-	-
Mov Cap-2 Maneuver	636	608	-	590	579	-	-	-	-	-	-	-
Stage 1	786	743	-	911	818	-	-	-	-	-	-	-
Stage 2	922	828	-	746	717	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	10	11.1			1			0.1		
HCM LOS	B	B								
<hr/>										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	1281	-	-	748	590	1522	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.029	0.007	0.001	-	-		
HCM Control Delay (s)	7.8	0	-	10	11.1	7.4	0	-		
HCM Lane LOS	A	A	-	B	B	A	A	-		
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-		

Intersection

Int Delay, s/veh 2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	2	23	29	0	8	12	207	26	8	151	10
Future Vol, veh/h	12	2	23	29	0	8	12	207	26	8	151	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	-4	-	-	-2	-	-	4	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	0	0	6	0	0	0	8	1	0	0	2	0
Mvmt Flow	12	2	23	29	0	8	12	209	26	8	153	10

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	424	433	158	433	425	222	163	0	0	235	0	0
Stage 1	174	174	-	246	246	-	-	-	-	-	-	-
Stage 2	250	259	-	187	179	-	-	-	-	-	-	-
Critical Hdwy	5.9	5.3	5.66	6.3	5.7	5.8	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	4.9	4.3	-	5.3	4.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.354	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	626	599	900	591	576	843	1380	-	-	1344	-	-
Stage 1	882	804	-	805	746	-	-	-	-	-	-	-
Stage 2	824	760	-	854	786	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	612	589	900	567	566	843	1380	-	-	1344	-	-
Mov Cap-2 Maneuver	612	589	-	567	566	-	-	-	-	-	-	-
Stage 1	873	798	-	797	739	-	-	-	-	-	-	-
Stage 2	808	752	-	824	780	-	-	-	-	-	-	-

Approach	EB	WB			NB		SB	
HCM Control Delay, s	10	11.3			0.4		0.4	
HCM LOS	B	B						
<hr/>								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1380	-	-	762	610	1344	-	-
HCM Lane V/C Ratio	0.009	-	-	0.049	0.061	0.006	-	-
HCM Control Delay (s)	7.6	0	-	10	11.3	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

Appendix D
Scope of Work Meeting Form



PRE-SCOPE OF WORK MEETING FORM

Information on the Project Traffic Impact Analysis Base Assumptions

The applicant is responsible for entering the relevant information and submitting the form to VDOT and the locality no less than three (3) business days prior to the meeting. If a form is not received by this deadline, the scope of work meeting may be postponed.

Contact Information

Consultant Name: Tele: E-mail:	Kevin Savage, PE, PTOE - Dynamic Traffic, LLC (445) 202-5400 ksavage@dynamictraffic.com
Developer/Owner Name: Tele: E-mail:	David Panella - ABTB Mid-Atlantic, LLC (860) 424-6104 dpanella@southpaw.co

Project Information

Project Name:	Proposed Taco Bell - 10120 Fairfax Blvd		Locality/County:	City of Fairfax
Project Location: (Attach regional and site specific location map)	The subject site is located within the Boulevard Marketplace, along the westbound side of Fairfax Boulevard (US Route 50)			
Submission Type	Comp Plan <input type="checkbox"/>	Rezoning <input checked="" type="checkbox"/>	Site Plan <input checked="" type="checkbox"/>	Subd Plat <input type="checkbox"/>
Project Description: (Including details on the land use, acreage, phasing, access location, etc. Attach additional sheet if necessary)	It is proposed to construct a 2,256 SF Taco Bell with Drive-Thru on a parcel of land that was previously approved for the construction of a retail building and separately, a bank with drive-thru. Access to the site is currently provided via one full movement and two right turn in/right turn out driveways along Fairfax Boulevard (US Route 50) and one full movement driveway along Plantation Parkway. No changes are proposed to the existing access points.			
Proposed Use(s): (Check all that apply; attach additional pages as necessary)	Residential <input type="checkbox"/>	Commercial <input checked="" type="checkbox"/>	Mixed Use <input type="checkbox"/>	Other <input type="checkbox"/>
	Residential Uses(s) Number of Units: _____ ITE LU Code(s): _____ _____		2,256 SF _____	
	Commercial Use(s) ITE LU Code(s): 934 _____		Other Use(s) ITE LU Code(s): _____ Independent Variable(s): _____ _____	
	Square Ft or Other Variable: _____		_____	
Total Peak Hour Trip Projection:	Less than 100 <input type="checkbox"/>	100 – 499 <input checked="" type="checkbox"/>	500 – 999 <input type="checkbox"/>	1,000 or more <input type="checkbox"/>

It is important for the applicant to provide sufficient information to county and VDOT staff so that questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

Traffic Impact Analysis Assumptions

Study Period	Existing Year: 2023	Build-out Year: 2025	Design Year: N/A
Study Area Boundaries (Attach map)	North: N/A		South: Fairfax Boulevard (US Route 50)
	East: Fair Woods Parkway		West: Boulevard Marketplace Signalized Driveway
External Factors That Could Affect Project (Planned road improvements, other nearby developments)	No planned roadway improvements have been identified within the study area. The George Snyder Trail Project is proposed along the rear of the parcel, extending the existing trail to the west.		
Consistency With Comprehensive Plan (Land use, transportation plan)	The proposed use is permitted within the CR - Commercial Retail Zoning District.		
Available Traffic Data (Historical, forecasts)	AADT for Fairfax Boulevard (US Route 50) is 37000 per VDOT Traffic Data. (41000 AADT on weekdays)		
Trip Distribution (Attach sketch)	Road Name: To be determined based on existing traffic counts/travel patterns	Road Name:	
	Road Name:	Road Name:	
Annual Vehicle Trip Growth Rate: 1%	Peak Period for Study (check all that apply)	<input checked="" type="checkbox"/> AM <input checked="" type="checkbox"/> PM <input type="checkbox"/> SAT	
	Peak Hour of the Generator	Peak Street Hour	
Study Intersections and/or Road Segments (Attach additional sheets as necessary)	1.Fairfax Boulevard & Boulevard Marketplace	6.	
	2.Fairfax Boulevard & Central Right Turn In/Right Turn Out Driveway	7.	
	3.Fairfax Boulevard & Eastern Right Turn In/Right Turn Out Driveway	8.	
	4.Fairfax Boulevard & Fair Woods Parkway	9.	
	5.Fair Woods Parkway & Full Movement Driveway	10.	
	Trip Adjustment Factors	Internal allowance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Reduction: _____ % trips	Pass-by allowance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Reduction: _____ % trips
Software Methodology	<input checked="" type="checkbox"/> Synchro <input type="checkbox"/> HCS (v.2000/+) <input type="checkbox"/> aaSIDRA <input type="checkbox"/> CORSIM <input type="checkbox"/> Other _____		
Traffic Signal Proposed or Affected (Analysis software to be used,	Fairfax Boulevard & Boulevard Marketplace; Fairfax Boulevard & Fair Woods Parkway		

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progression speed, cycle length)	
Improvement(s) Assumed or to be Considered	N/A
Background Traffic Studies Considered	Traffic from the WillowWood & Northfax Developments to be incorporated into the Background Traffic Growth for No Build conditions. Note that a TIS has not yet been prepared for the WillowWood development, so trip generation estimates will be prepared based upon the proposed development program.
Plan Submission	<input type="checkbox"/> Master Development Plan (MDP) <input checked="" type="checkbox"/> Generalized Development Plan (GDP) <input type="checkbox"/> Preliminary/Sketch Plan <input type="checkbox"/> Other Plan type (Final Site, Subd. Plan)
Additional Issues to be Addressed	<input checked="" type="checkbox"/> Queuing analysis <input type="checkbox"/> Actuation/Coordination <input type="checkbox"/> Weaving analysis <input type="checkbox"/> Merge analysis <input type="checkbox"/> Bike/Ped Accommodations <input checked="" type="checkbox"/> Intersection(s) <input type="checkbox"/> TDM Measures <input type="checkbox"/> Other _____

NOTES on ASSUMPTIONS:

1. Manual Turning Movement Counts will be conducted during the weekday morning (6:00 to 9:00 AM) and weekday evening (4:00 to 7:00 PM) peak hours during a typical weekday at the following intersections:
 - a. Fairfax Boulevard (US Route 50) & Boulevard Marketplace
 - b. Fairfax Boulevard (US Route 50) & Central Right Turn In/Right Turn Out Driveway
 - c. Fairfax Boulevard (US Route 50) & Eastern Right Turn In/Right Turn Out Driveway
 - d. Fairfax Boulevard (US Route 50) & Fair Woods Parkway
 - e. Fair Woods Parkway & Full Movement Driveway
2. Synchro files will be provided by the City of Fairfax.

SIGNED: Kevin Savage DATE: 5/16/2023
 Applicant or Consultant

PRINT NAME: Kevin Savage
 Applicant or Consultant

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